ENST1001

Introduction to Environmental Studies

COURSEPACK

2015-2016

Department of Geography & Environmental Studies
Carleton University

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Some Useful Resources:

Library and Research Help:
Staff at the Library Learning Commons Desk
Tel: 613 520 2734
http://www.library.carleton.ca/learning_commons/index.html

Writing assistance
Writing Tutorial Service, 229 Patterson Hall.
Tel: 613 520 6632
URL: www.carleton.ca/wts

Citation Help
For online help go to the following link:
www.library.carleton.ca/howdoI/citing.html

International Student Advisory:
Help with conversation skills or proof reading
501 University Centre, 613 520 6600

Academic Accommodations:
Paul Menton Centre, 500 University Centre
www.carleton.ca/pmc or 613 520 6608

Course Outline - ENST1001A –Introduction to Environmental Studies

Fall/Winter 2015-2016 - Department of Geography and Environmental Studies
Carleton University

IMPORTANT NOTE: This course precludes credit in FYSM 1100. That means that if you take both of them, you will only get a credit for one of them. Please don't waste your money! If this applies to you, please talk to Scott to get advice on which course to take.

Instructors: Scott Mitchell, Loeb B359
613-520-2600 extension 2695
Scott.Mitchell@carleton.ca
Office hoursTBA

Paul Csagoly, Loeb A209
613-520-2600 extension8934
paul.csagoly@carleton.ca
Office hours TBA

TAs: Michelle Fairbrother, Alex dePaiva (tutorial group assignments TBA)
Contact details for your TAs will be discussed in the first tutorial group meetings (Sept. 8/9/11). Please note that the TA assignments MAY change in January if necessary for scheduling reasons.

Course objectives:

This course, and the Environmental Studies (ENST) program, aim to prepare informed and skilled individuals for participation in the resolution of environmental conflicts and the environmental debates critical to our future (see http://carleton.ca/geography/environmental-studies/). This includes developing an understanding about what the environment is and how it works, as well as examples of effective strategies for change.

The environment is a highly complex set of interactive systems in which humans play an increasingly important part. The first part of the course will therefore focus on basic, cross-cutting environmental principles and processes, such as resources, energy, flow, ecosystems, cycling, geomatics, planning, and management. With this foundation in place, the course will then emphasize specific environmental `media´ and issues, such as climate change, minerals and energy, endangered species, forests, agriculture, water, marine, urban issues, and aboriginal and polar issues. In addition, the course will make links to timely environmental events and news, such as the Paris climate change conference and launch of the UN Sustainable Development Goals later in 2015.

*Introduction to Environmental Studies*is the first core course in the B.A. (Honours or General) program in Environmental Studies. It is also a popular interdisciplinary elective for students in many other degree programs.

Please make sure you do not try to take this course in addition to FYSM 1100, as you will only be given credit for one of the courses.

Course calendar:

Full group in lecture hall:		Mondays 11:35-13:25, University Centre 282 (currently scheduled to move to Tory 340 in Winter)
Tutorial groups: (all locations to be confirmed, & they change in winter)	A1: A2: A3: A4:	Wednesdays 14:35-16:25, University Centre 280 Tuesdays 9:35-11:25, Mackenzie 3190 Fridays 11:35-13:25, River Building 3220 CLOSED

Your group assignment **was set as part of your course enrolment** using Carleton Central; **you must attend your own assigned group,** unless otherwise instructed by your TA. Assignment due dates are also usually tied to your assigned tutorial.

Tutorial groups may sometimes meet somewhere besides the assigned room (e.g. in computer labs in the Loeb building, or outside). Monitor cuLearn and your email for announcements.

Detailed schedules for the term work and topics will be handed out as part of your coursepack. Individual discussion topics may shift according to the variable pace of class interaction, but you should note upcoming deadlines, plan ahead to manage your workload, and submit all work on time. While this is important in any course, in this class you will be completing a fair amount of cooperative work, and other students will often be counting on your portions of larger projects.

Tests and exams: There will be an online test starting at the end of week 7 of the fall term, due on November 6; an in-class test at the beginning of February; and a final exam in the exam period in April.

Course web site / electronic resources:

This course will use email and cuLearn for communications – be sure to monitor the cuLearn site, and either check your Carleton email regularly, or forward it to another account that you will check regularly.

Course readings:

The following textbook has been ordered and will be available at the Campus bookstore:

Dearden and Mitchell, 2012. Environmental Change and Challenge – A Canadian Perspective. Oxford Press, 4th edition, 606 pp.

Supplemental required readings will be assigned as needed.

Grading: Your grade will be evaluated based on a combination of tests, individual assignments, group projects, and participation. Some assignments will have portions of their marking schemes that come from peer evaluation, or specific participation scores. There is also a general participation score based on your attendance and interaction in tutorials throughout the year.

Fall Test (due Nov. 6):	10%
Winter Test (Feb. 1):	10%
Final exam:	25%
Tutorial assignments:	25% (details on assignments)
Final project (including Assignment 6):	30%

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

Late policy

If a legitimate reason prevents you from submitting your work on time through regular means, it is your responsibility to get in touch with us **as soon as possible** (the earlier the better), to work out an alternative arrangement. Work that is late because you simply fell behind or forgot a deadline will be assigned a penalty. Some course requirements will have their own specific penalties, and / or limits on how late assignments will be accepted. Some of your responsibilities will be part of group submissions, and there will not necessarily be any possibility for a late submission – in these cases you should be especially careful to plan accordingly. In absence of any assignment-specific late penalty, there will be a deduction of 5% per day that the work is late without acceptable reason.

Instructional & Conduct Offences: Instructional offences include, among other activities, cheating, contravening examination regulations, plagiarism, submitting similar work in 2 or more courses without prior permission, and disrupting classes. Conduct offences apply in areas of discrimination and sexual harassment. Further information about University regulations that define and regulate these offences is presented in the undergraduate Calendar*:* *http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/acadregsuniv14/*

Plagiarism is a serious offence and will not be tolerated. Plagiarism is the submission of someone else's writing/ideas/work as your own. All ideas presented which are not your own must be properly referenced. While forms of plagiarism may vary, each involves verbatim or near verbatim presentation of the writings or ideas of others as ones own without adequately acknowledging the original source. Plagiarism includes (but is not limited to) copying from a book, article or another student, downloading material or ideas from the Internet, or otherwise submitting someone else's work or ideas as your own.[1] **Plagiarism offences result in mandatory reporting to the Dean's office.**

You will often be working collaboratively in this class, but unless you receive specific written instructions to do otherwise, **you must write your assignments and tests individually**. In all cases, if there is any confusion, or you have different interpretations than your peers over individual or group responsibilities, please be sure to get clarification from the instructor **before** the assignment is due. If in doubt, assume you should be submitting a completely independently prepared piece of work.

[1]This statement on plagiarism courtesy of K. Torrance, 2003, GEOG3108 Course Outline, originally from http://www.carleton.ca/geography/geography/course_outlines/GEOG3108_0304.html.

Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:
Pregnancy obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see the Student Guide.

Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see the Student Guide.

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam in April.

Course Materials

Our lectures and course materials, including power point presentations, outlines, and similar materials, are protected by copyright. We are the exclusive owners of copyright and intellectual property in the course materials. You may take notes and make copies of course materials for your own educational use. You may not and may not allow others to reproduce or distribute lecture notes and course materials publicly for commercial purposes without my express written consent.

ENST 1001 Class and Tutorial Schedule (2015-2016)

Term 1 – *Itinerary (Subject to Change[1])*

Week	*Lecture date (Instructor)*[2]	*Lecture (Mon 11:35)*	*Reading*[3]*:*	*Tutorial (**following** the lecture, on Tue., Wed. or Fri.)*	*Work due in tutorials*[4]
1	Sep 4 (SM&PC)	Environment, Resources, & Society	Ch 1	Assignment 1 - Ecological Footprint **(Sep 8/9/11)**	
2	Sep 14 (SM)	Geomatics	cuL	Assignment 2 - Reading maps	Assignment 1
3	Sep 21 (SM)	Energy, Flows & Ecosystems	Ch 2	Map library intro (meet at MADGIC desk)	
4	Sep 28 (SM)	Ecosystem Change	Ch 3, cuL	Assignment 3	Assignment 2
5	Oct 5 (SM)	Matter Cycling	Ch 4	Group work	
6	Oct 12	NO LECTURE (Thanksgiving)		Assignment 4 (test preparation)	Assignment 3
7	Oct 19 (PC)	Planning and Management: Philosophy	Ch 5	Test goes online Oct 23 (cuLearn) Introduce Assignment 5	
RW		READING WEEK – no classes Oct 26-30 - test still online			
8	Nov 2 (PC)	Planning and Management: Process, Method & Products	Ch 6	Proposal preparation, library workshop	**Test is due Nov 6** (online)
9	Nov 9 (SM)	Minerals and Energy	Ch 12	Report planning, next steps	Proposal (Assignment 5)
10	Nov 16 (SM)	Climate Change – Energy balance, Science Perspectives	Ch 7, cuL	TA and peer help for report	1st Drafts due to TA and peer (Assignment 5).
11	Nov 23 (SM)	Climate Change – Human Implications & Responses	Ch 7, cuL	Discuss 1st draft with your editor, TA	Peer editing suggestions
12	Nov 30 (SM)	Forests	Ch 9	Project planning: confirm groups; journal article searches refresher	
13	Dec 7 (SM)	Research ethics, term 2 projects, & term 1 wrap-up Course Evaluations (SM)	cuL	None	Assignment 5 final version due Dec 7th(last day of term)

[1] Due dates and timing of tests are fixed once the course begins; the list of topics covered and associated textbook readings is approximately correct.

[2] SM = Scott Mitchell. PC = Paul Csagoly.

[3]Ch = Chapter number in textbook; pp=page range in textbook; cuL = readings will be listed on cuLearn

[4] Tutorial assignments are, by default, due at 5pm on the Friday of the week noted; check each assignment for exceptions.

ENST 1001 Class and Tutorial Schedule (2015-2016)

Term 2 – *Itinerary (Subject to Change[1])*

Week	*Lecture date (Instructor)* [2]	*Lecture (Mon 11:35)*	*Reading*[3]*:*	*Tutorial (**following** the lecture, on Tue.,Wed. or Fri.)*	*Work due in tutorials*[4]
1	Jan 11 (PC)	Water I	Ch 11	Proposal workshop (Assignment 6)	
2	Jan 18 (PC)	Water II	Ch 11	Present project proposals	Assignment 6 (presentations)
3	Jan 25 (PC)	Ocean and Marine	Ch 8	Detailed action plan; proposal workshop; test preparation	Proposal (paper)
4	Feb 1 (PC & SM)	**TEST**	TBA	Journal articles (Assignment 7)	
5	Feb 8 (SM)	Agriculture	Ch 10	Project Work	
RW	READING WEEK – no classes Feb 15-19				
6	Feb 22 (PC)	Endangered Species & Protected Areas	Ch 14	Project Work	Assignment 7
7	Feb 29 (PC)	Urban Environments	Ch 13	Project Work	
8	Mar 7 (PC)	Aboriginal and Polar Issues	cuL	Project Work	
9	Mar 14 (PC)	Movie for Assignment 8	TBA	Movie Discussion, Assignment 8	
10	Mar 21 (PC)	Making it Happen	Ch 15	Project Work – Press Release Workshop	Assignment 8
11	Mar 28 (PC & SM)	Review & exam prep Course Evaluations		By arrangement with TA	Major communication product (due Apr 1)
12	Apr 4 (PC & SM)	Project presentations		Submit project	Rest of project due April 8

[1] Due dates and timing of tests will be fixed at the start of term; the list of topics covered and associated textbook readings is approximately correct.

[2] SM = Scott Mitchell. PC = Paul Csagoly.

[3] Ch = Chapter number in textbook; pp=page range in textbook; cuL = readings will be listed on cuLearn

[4] Tutorial assignments are, by default, due at 5pm on the Friday of the week noted; check each assignment for exceptions.

General Information About Tutorial Work

Tutorials are an essential part of this course. The eight term assignments and the major project for the course are all conducted through the tutorials. The grades for these components account for 55% of your final grade, therefore it is impossible to pass this course through the lectures, tests and final exam alone. Please take the tutorials seriously. If a conflict or health problem comes up that interferes with your regular attendance and participation in the tutorials, make sure that you contact your TA as soon as possible to make alternative arrangements.

Grading schemes for each of the assignments are provided in this coursepack, and vary according to the tasks at hand. However, in general, grades are governed by university-wide standards and practices. You will receive either a numeric or a letter grade, depending on the work, but in either case the meaning behind the grade is similar. The following table elaborates on how these grades conform to the Carleton grade point system, with some generalized descriptions of the levels:

Grade (letter/%)	Grade Point	Description	
A+ 90-100%	12	**Excellent**	Demonstrates a superb understanding of the material, and makes links between the issues and topics in the lab material and course readings or lectures. Unexpected insights. Incorporates additional information. Very few if any grammatical or spelling errors. Mature writing.
A 85-89%	11	**Excellent – Very Good**	Work shows comprehensive knowledge of the material at hand, critical thinking and originality. Clear, organized writing and precise, effective expression. Few errors.
A- 80-84%	10		
B+ 77-79%	9	**Very Good**	Shows good knowledge of the material and evidence of independent thought. Well organized. Writing flows fairly smoothly. Vocabulary is appropriate, but lacks the effectiveness of "A" work.
B 73-76%	8		
B- 70-72%	7	**Good**	
C+ 67-69%	6		Shows adequate understanding of the material, but lacks organization and coherency. Writing does not `effectively communicate ideas. Suffers from obvious errors.
C 63-66%	5	**Acceptable** / "**OK**"	
C- 60-62%	4		
D+ 57-59%	3		Shows limited knowledge and understanding of the material. Evidence of carelessness or lack of effort. Little to no originality or evidence of independent thought. Weak writing with frequent errors.
D 53-56%	2	**Poor**	
D- 50-52%	1		
F 0-49%	0	**Unacceptable**.	Failure to meet conditions of satisfactory performance. Misinterpretation of the material. Poorly organized. Betrays little to no effort. Poor writing with frequent errors.

Week 1
Sep. 8-11

ENST 1001 – Introduction to Environmental Studies

Assignment 1 – Calculating Your Ecological Footprint

Due Date: Sept. 18, 2015, **online (cuLearn), by 5 pm**
Evaluation: Not graded, but ***you must submit this exercise to successfully pass the course***

The purpose of this assignment is to introduce the idea that humans pose a threat towards the environment. At present, the rate at which we consume natural resources, and create waste (including carbon emissions) exceeds Earth's ecological capacity. We all share responsibility, but it is certain that some individuals, cities or countries have a more pronounced ecological demand than others. The Ecological Footprint can be used to measure the area of land and water that is required to sustain an individual's lifestyle. The same measurement can be applied to a group of people, city, country or the globe. This type of measurement is also a good way to compare the ecological demand of different countries. Interestingly, Canada has one of the largest ecological capacities; however it also has one of the highest ecological footprints. Presently, it is estimated that the global average lifestyle would require 1.5 Earths to sustain our ecological demands.

The assignment:

1) Using a web browser, navigate to the following link: http://myfootprint.org
This will take you to an online questionnaire to assess your very own ecological footprint. Make note of the types of questions asked, and try to answer each question honestly.

2) At the end of the questionnaire you will be given your results. How many Earths would we need if everyone lived the way you did? What is your total ecological footprint? What are your Carbon, Food, Housing, and Goods/Services footprints in hectares (one hectare is equal to 10 000 m^2)? How is your ecological footprint divided amongst the 4 different biomes (forest, marine, pasture, cropland)?

3) In addition to the results of the questionnaire, write a brief discussion related to your ecological footprint. How do your results compare to your country's average footprint? Based on the questions asked during the questionnaire, what changes could you make as an individual to reduce the land and water requirements for your lifestyle? Do you think that this questionnaire was a fair assessment of your environmental impact? What other questions could have been asked, and why?

*** Each student should type a simple word processor document with his or her questionnaire results and response. You do NOT need a separate title page, but please ensure that your full name, student number, course code and date are included on the top right side of your front page. Upload the resulting file through cuLearn ***

Weeks 2-4
Sep. 15-Oct. 2

ENST 1001 – Introduction to Environmental Studies

Assignment 2 – Exploring Ottawa using Maps

Due Date: October 2, at **5 pm**, electronically through cuLearn
Evaluation: 2.5% of your final grade (10% of the tutorial assignments mark)

You will be examining a number of maps of Ottawa, Ontario at different scales and time periods. The objective is for you to learn how to read topographic and land use maps, and examine the anthropogenic (human derived) changes that have occurred in Ottawa since 1946. Maps are considered to be one of the oldest forms of non-verbal communication and were probably created by humans before they developed language. Maps help to confirm the well-known saying: 'a picture is worth a thousand words' (Seager, 2005). Understanding how to use and read a map makes them much more useful and informative.

This assignment will be divided into two parts. The first part will provide you with the opportunity to explore the Ottawa region using a 1:50 000 topographic map called "Ottawa 31G/5". Your TA will have a number of copies of this map for you to use in the tutorial room. Obtain a copy of this map and make sure you understand the concepts of scale, coordinates, projections, magnetic north, and symbology as they apply to this map sheet. In addition to this, you should be able to measure coordinates, distances and bearings. The second part of this assignment uses several land use maps of Ottawa at different scales and time periods to investigate how urbanization in Ottawa has changed overtime. The maps for this part of the assignment will be on display in the MADGIC library, which is on the 1st floor of Carleton's library (if you go down the stairwell closest to the front doors of the library, the MADGIC desk is right in front of you when you come out of the stairs).

List of Maps for this Assignment:

Map 1 - Ottawa, Ontario/ Experimental Image Map (1990) 1:50 000 (ref: G3462.N3A4 1990.c3)

Map 2 - City of Ottawa Land Use Plan (1946) 1:21 333 (ref: MPH G3464.0864 1946.c3)

Map 3 – Generalized Existing Land Use [Ottawa] (1969) (ref: G3464.08G4 1969 08 C.2)

Map 4 - Ottawa Carleton Urban Land Use (1985) (ref: G3464 08 G4 1985.O82)

Map 5 - Ottawa Carleton Urban Land Use (1991) (ref: G3464 08 G4 1991 08 C.2)

Map 6 - City of Ottawa General Use – Urban Area (2006) (ref: G3464.08G4 2006.O85)

More on Topographic Maps:

Check out the following link for a complementary reading to our first lecture and for another introduction to the basics of maps:

http://www.progonos.com/furuti/MapProj/Normal/CartDef/cartDef.html

Basic Definitions:

Map: "Maps are the world reduced to points, lines, and areas, using a variety of visual resources: size, shape, value, texture or pattern, color, orientation, and shape. A thin line may mean something different from a thick one, and similarly, red lines from blue ones." http://math.rice.edu/~lanius/pres/map/mapdef.html

Topographic Map: "A map showing elevation and the shape of the terrain (i.e. hills, peaks, and valleys) using raised-relief, shaded-relief, or contour lines." In addition to terrain, a topographic map describes the urban features of an area (roads, housing, industrial, etc). http://www.mapexp.com/glossary.htm

Scale: "The relationship between distances on a map and the corresponding distances on the earth's surface expressed as a fraction or a ratio. An object 1cm on the map could be 10 000cm on the ground. This would be a 1:10,000 scaled map." http://math.rice.edu/~lanius/pres/map/mapdef.html

Coordinates: "A series of numbers describing a precise geographic location. There are many coordinate systems found on USGS maps, including traditional geographic coordinates, UTM coordinates, and state plane coordinates. Coordinates describing the latitude and longitude of a particular point are still the most common. (http://www.mapexp.com/glossary.htm)

Universal Transverse Mercator Grid System (UTM): "This system is a specialized application of the Transverse Mercator projection which is both cylindrical and conformal. It divides the world into 60 numbered zones, both north and south, separated by the equator. Each zone spans six degrees of longitude and has its own central meridian. The origin of each UTM zone is the intersection of its central meridian and the equator, and the parameters are applied to this origin to make all x and y values positive. The first parameter is the false easting - a linear value applied to the origin of the x-coordinates - or the central meridian. The second parameter is the false northing - a linear value applied to the origin of the y-coordinates - or the equator." http://www.fgdl.org/tutorials/howto_reproject/Definitions.html

See Figure 1, below.

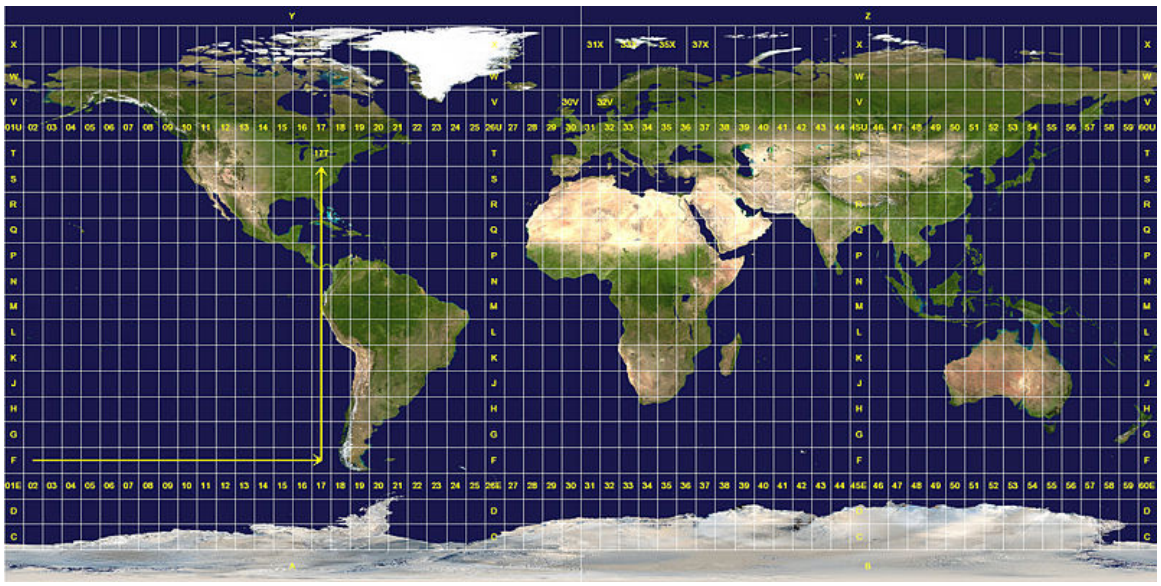


Figure 1: Global UTM zones.
http://en.wikipedia.org/wiki/File:Utm-zones.jpg

Projection: "A cartographical map projection is a formal process which converts features between a spherical or ellipsoidal surface and a projection surface which is often flat." The link below will provide you with a more detailed description:
http://www.progonos.com/furuti/MapProj/Normal/CartDef/MapDef/mapDef.html

Magnetic North: The direction to which your compass needle points.

True North: The direction of the northern rotational axis of the earth, the North Pole.

The Assignment:

Part 1 – Exploring Ottawa, Ontario

Obtain a copy of the topographic map, and begin to explore its contents. The bottom of the map provides information related to scale, elevation, and the coordinate system used. The right hand side of the map describes its UTM zone, the direction for magnetic north, and true north. On the back side of the map there is a detailed legend that describes the map elements, a glossary, and a list of abbreviations. The map makes use of two coordinate systems; UTM (blue) and latitude/longitude (black). Explore the map and answer the questions below.

Questions: For Part 1, the questions are waiting for you in cuLearn. Read the questions there and enter your answers into the provided boxes. In some cases, there are specific instructions on how to format your answers. Make sure you pay careful attention to those instructions, to make sure that your answers are graded properly by the computer.

Part 2 – Urban Sprawl and Ottawa's Greenbelt

Background Information:

In 1950 Jacques Gréber proposed the concept of Ottawa's Greenbelt. The intention of this proposal was to limit the outward expansion of the city by restricting development. Eventually the proposal passed and a 20 000 hectare zone that enclosed the city centre was implemented (National Capital Commission, 1991). The Greenbelt begins in the West end near Shirley's Bay (431500E 5023500N), arcs down south passing through Ottawa's airport and then arcs up north again towards Green Creek (a tributary of the Ottawa River located at 455500E 5035700N). Gréber's proposal was intended to support a population of 600 000 while staying within the proposed developable limits. The greenbelt became a zone where urban development would be restricted but dedicated to agriculture, outdoor recreation, wetlands, forests and government and private research centres (Palermo, 1992). Figures 2 and 3 (to the right and below) show the spatial extent of the Greenbelt.

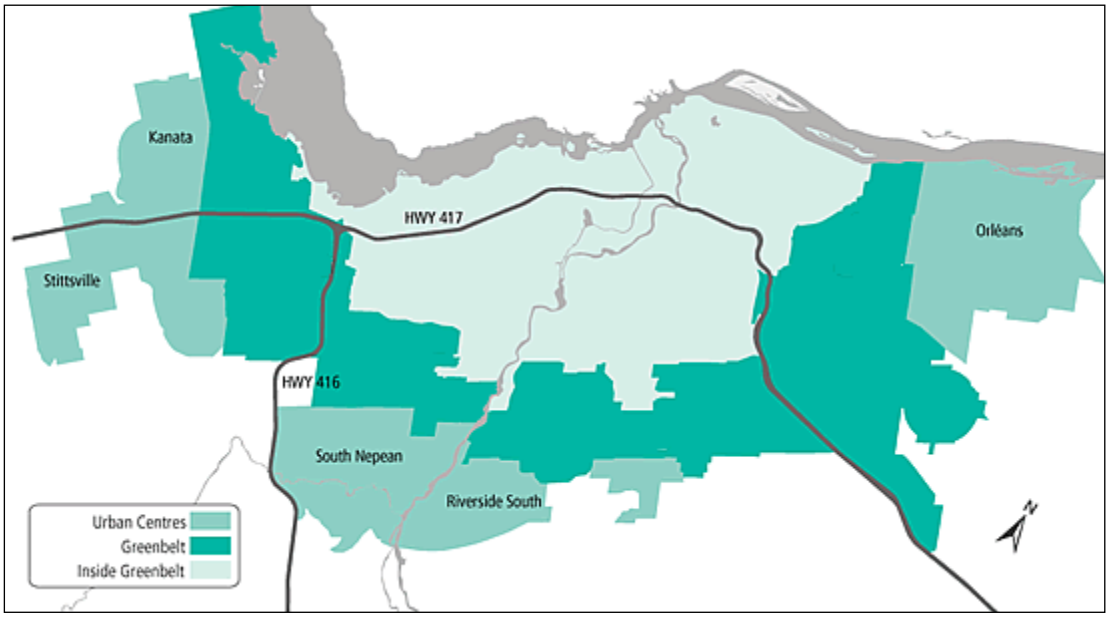


Figure 3: Ottawa's Greenbelt (Cross, 2007).

Examining Ottawa through time:

For this part of the assignment you will need to thoroughly examine maps 1 – 6 in the map library. Make note of the year and scale of each map to help you interpret them as it relates to this part of the assignment. Maps 2 through 6 are urban land use maps from various times. Early maps show only the old City of Ottawa. Maps 4 and 5 were produced

by the old Regional Municipality of Ottawa Carleton, which was replaced by the amalgamated City of Ottawa before Map 6 was created. Map 1 is actually an aerial photo, which may be useful to interpret the type of landuse and development in Ottawa as of 1990. Map 2 shows the city boundaries of Ottawa in 1946, the earliest date you will explore, which is a few years before Gréber proposed the Greenbelt. Compare the city limits and developed areas in the various maps. Use features such as the Ottawa River, the Rideau River, or Dows Lake to help guide your comparison.

Short Answer Questions:

2.a) In your opinion, how effective is Ottawa's Greenbelt with respect to restricting urban sprawl? How has the Greenbelt changed since it was first implemented in the 1950s? Do you think the Greenbelt is still serving its intended purpose? (/5)

b) Provide a summary of how urban development has changed over time in Ottawa with specific references to the available maps. Within your discussion describe **when** and **where** growth has occurred, and comment on the types of development. (/5)

Evaluation: (worth 2.5% of your final mark)

Assignment 2 will be initially assessed out of 21 marks, broken down as follows:

Part 1:
-each question is worth 1 mark (total /11)

Part 2:
-did you provide a well-structured and compelling discussion for both questions? (/10)

Assignment Format:
-submit your assignment through cuLearn, using the instructions provided there.

***** 5% will be deducted for every day this assignment is late*****

Works Cited:

Cross, Ian. 2007. Ottawa Counts. Aug.20/08. http://www.ottawa.ca/city_services/statistics/counts/counts_jan_03/index_en.shtml

National Capital Commission. 1991. Ecological Analysis of the Greenbelt. Hough Stansbury Woodland Limited: Ottawa

Palermo, Frank. 1992. The Ottawa Greenbelt: A landuse proposal. TUNS Architecture: Canada.

Seager, John. 2005. Maps: University of Vermont. Aug. 18/08. http://chnm.gmu.edu/worldhistorysources/unpacking/mapsmain.html

Weeks 4-6
Sep. 29-Oct. 16

ENST 1001 – Introduction to Environmental Studies

Assignment 3 – Assessing Canada's National Park System with Google Earth
~An Interactive Mapping Assignment~

Date Due: Oct. 16, **by 5 pm, through cuLearn**
Evaluation: 2.5% of your final grade (10% of the tutorial assignments mark)

In Assignment 2, you were given the opportunity to explore Ottawa, Ontario with a variety of paper maps. Although paper maps continue to be useful geographical tools, with the onset of advanced technology, digital maps have become increasingly popular. For this assignment you will be exploring a digital map of Canada using Google Earth. Google Earth displays georeferenced digital satellite imagery at varying resolutions to provide the user with a spatial representation of the globe. Google Earth is available without cost, and is generally compatible with most personal computers. A Google Earth user is capable of touring around the globe to learn more about our planet. In addition to this, users can create their own maps to provide others with useful information related to a particular location. This allows groups to share spatial information, which can be useful for community consultation and planning purposes.

For this assignment you will be put into groups of 3 or 4 to form a hypothetical committee that is responsible for assessing the present state of the National Parks system. The intent of Canada's National Parks system is to protect representative natural areas of Canada and maintain their natural state for the future. Do you think that the parks system has met its intended goal?

You will be provided with two data files that can be viewed in Google Earth. One file describes the present spatial distribution of Canada's National Parks, and the other one describes the spatial distribution of the 15 different ecozones within Canada (discussed in Chapter 2). Compare the spatial distribution of the current parks with that of Canada's ecozones. Are there any ecozones that are not thoroughly represented within the National Parks system? Are there any ecozones that seem more represented than others? <u>After carefully exploring the provided data, each group is expected to propose where three new parks should be introduced so that the National Parks system will better represent Canada and its diverse landscape</u>.

Each group will email a Google Earth file (*.kml) to your TA that shows the boundaries of your proposed park locations (some guidance as to how to do this is provided below). To complement your *.kml file, a short typed report should be provided to justify your decisions.

Part 1 – Getting to know Google Earth

1) Retrieving and opening your data

In our cuLearn site there is a folder which contains two files: CARTS2.kmz and ecozones_of_Canada.kmz. Download these files and open them in Google Earth.

You should have two layers appear within Google Earth, one which represents the boundaries of Canada's ecozones using polygons, and another which marks Canada's National Parks with placemarks. (*see Figure 1*)

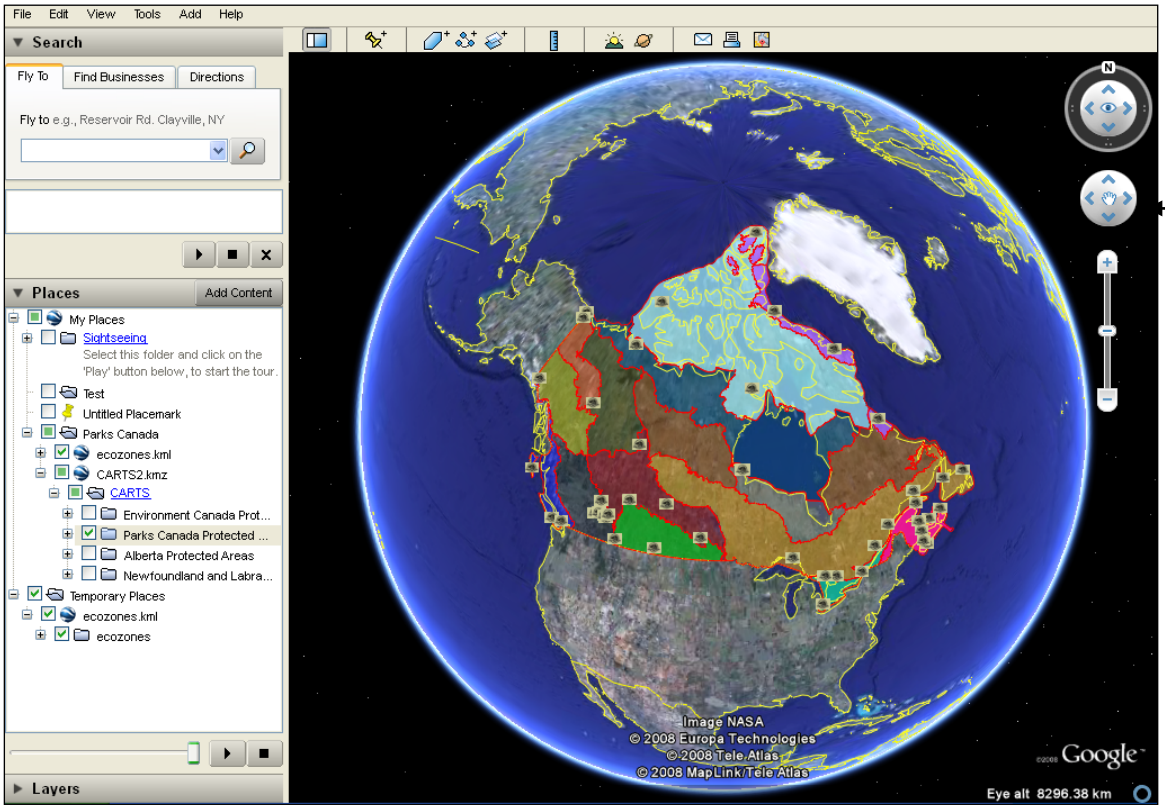


Figure 1: View of both files in Google Earth.

2) Explore both files and become comfortable with the software, if you aren't already.

Figure 2 below shows a picture of the toolbar at the top of the screen in Google Earth. There are a few buttons that you should become familiar with:

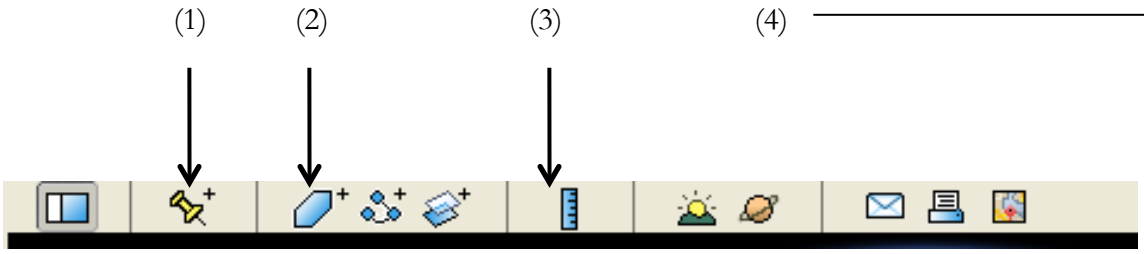


Figure 2: Google Earth Toolbar.

The first button (1) is used to add a placemark. If this tool is clicked, a window will pop up along with an icon which can be moved to any location. Move the icon to the desired location and then edit its' appearance and description. Within the window, the placemark can be given a title, and a description of the location can be added. In addition to this, attributes of the placemark such as colour, size, and symbol can be changed. The

second button (2) is used to add a polygon which is useful for mapping out boundaries. The third button (3) is a ruler which can be used to measure the distance between different locations. The fourth button (4) provides the ability to zoom in and out and rotate the globe in various directions.

* Play around with the graphical user interface (GUI), and become familiar with the available tools*

3) Saving and organizing your work:

When you add a new placemark or polygon they will be temporarily saved under places in the sidebar (see figure 3). These files can then be organized in a separate folder in 'My Places' where they will be permanently saved for later use in Google Earth on that particular computer. You can save these files to a separate folder on your computer by right-clicking on a file or folder and then clicking → Save Places As. You can then give the file a location and a name (make sure you save it as a *.kml). This file can be moved to other computers, to be read into Google Earth or even imported into other software that understand the KML format.

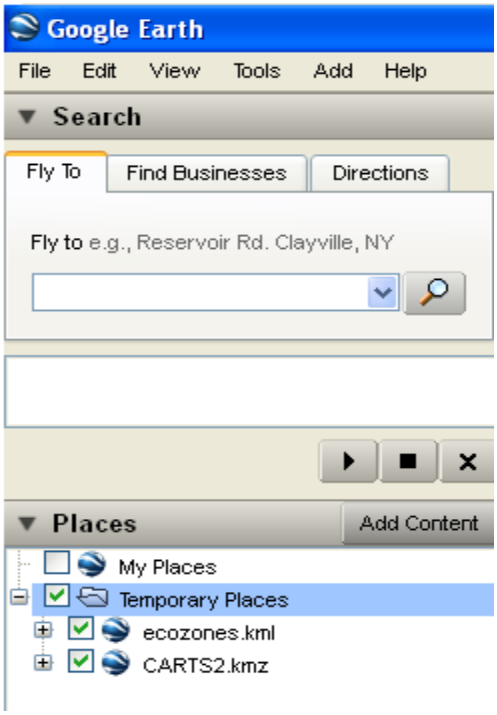


Figure 3 (left) shows the sidebar in Google Earth. Hear you can search for locations and manage your placemarks and polygons. When you open the files you retrieved from WebCT, they will open in your 'Temporary Places'. You can make these files permanent by moving them to 'My Places' (above). It is recommended that you create a new folder to keep all the files related to this assignment in. This can be done by right-clicking 'My Places' → add → folder. You can then rename this folder and drag the files in your 'Temporary Places' into your assignment 4 folder.

Figure 3: Sidebar in Google Earth.

Figure 4 (below) shows an example of what the sidebar will look like once you have created your new folder and moved your files into it. Note that you can expand each file to investigate its contents. If you click the contents in the sidebar, they will be highlighted on the map. Make sure that you are comfortable with managing your files. Practice creating placemarks and polygons and saving them to your assignment 3 folder. If you create a placemark or polygon in 'My Places' they will be available next time you open Google Earth

on that computer. If you right-click a file or a folder, you can save them as a *.kml or *.kmz into another folder on your computer. This is useful if you want to send the data to someone else such as your TA (for marking).

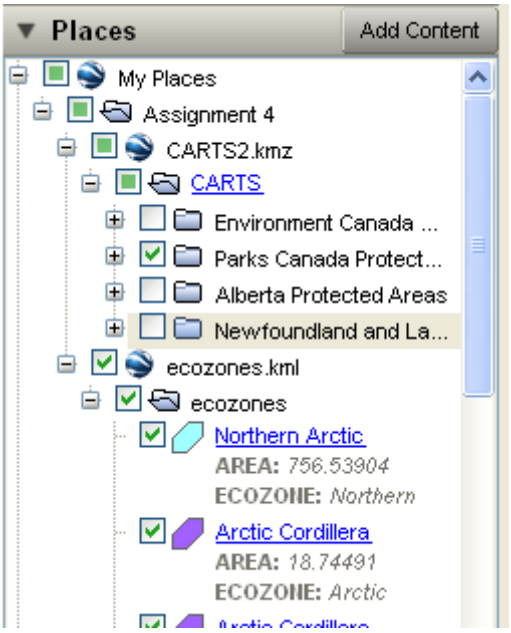


Figure 4: Places in Google Earth.

Figure 4 also shows that the CARTS2.kmz file has 4 different layers. The layer that is toggled on (Parks Canada Protect….) shows the national parks system. You should thoroughly investigate this layer, however the other layers may also help you decide where your proposed parks should be located.

4) We recommend that each group has at least one computer-savvy student. If you are already familiar with the software, you may be able to help your peers become comfortable with it too.

Part 1 Questions (/3)

a) Which national park is closest to Ottawa? What is the approximate distance (in kilometres) from Ottawa to this park? When was this park established? (/1)
b) Approximately how wide is Canada (in kilometres)? (/0.5)
c) How many National Parks represent the Prairie ecozone? If a National Park appears to be on the border of two ecozones, you may need to zoom in to determine a more precise location. (When you zoom in close enough, you will also see the park boundaries). Which park within the Prairie ecozone was established first? (/1.5)

Part 2 – New Parks Proposal (/7)

5) Within your group, explore the data and collaborate ideas with each other to come up with a proposal for 3 new National Park locations. Create a *.kml file which spatially describes your proposal, and provide a short written document that justifies your decision.

Your *.kml file should include:

- All three proposed parks delineated with polygons to represent their boundaries, and a placemark to identify where the administrative buildings will be located. Do not let them overlap existing national parks.

- You should include a short justification of why each Park should be introduced into the National Park system within the description of each placemark and provide a title that states the name of each proposed park.
- Each group is expected to submit a working *.kml file to your TA (upload it to cuLearn).

*** If you require any additional help with this assignment try to talk with your TA before the end of your tutorial. Otherwise try to arrange a meeting time with your TA for extra help***

Assignment Requirements and Evaluation: (one document per group)

The assignment will initially be assessed out of 10 marks, then the grade will be converted to a mark out of 2.5 for the final grades calculation. Submit the electronic document and the .kml file to your TA using cuLearn.

1)	Part 1 questions (typed)	/3
2)	Part 2 requirements	/4
3)	Brief write-up justifying your decision (typed)	/3
	Total	/10

*****All group members will receive the same mark. If any part of this assignment is submitted late the entire group will lose 5% per day.*****

ENST 1001 – Introduction to Environmental Studies

Assignment 4 – Fall Test Preparation

Due Date: N/A
Evaluation: Will be reflected in your fall test mark

At this point you have been introduced to the idea that science-based management of resources and the environment requires an understanding of many complex and dynamic natural and human processes. A good understanding of the systems that govern the globe helps to improve the decisions we make for today, and for the future. It is now widely agreed that humans are consuming Earth's resources faster then they are naturally replenished; it has become clear that this is causing drastic changes to the ecosystems. The Sydney Tar Ponds case study (described in the text in Chapter 1) is an excellent example of how human-induced environmental damage commonly occurs when science-based management is ignored. The intention of this week's assignment is to not only get you up to date on your reading for the course, but also to encourage an understanding of the important concepts discussed in lecture and the textbook in order to prepare you for your fall test.

The quiz will focus on the content within Chapters 1 to 4. Chapter 1 discusses the environment and its resources as they relate to management, and discusses different approaches to analyze different environmental and socio-economic systems. Chapter 2 provides a discussion on how energy flows through an ecosystem. In summary, the sun's energy is captured at the Earth's surface to drive several abiotic and biotic systems. Chapter 2 also describes how organisms within an ecosystem interact with their abiotic and biotic environment. For example, while some species are limited to a specific geographical region in which an optimal temperature persists, other species may be limited to regions where their prey species are rarely found. Chapter 3 discusses the nature of ecosystem change, and how humans influence these processes, while Chapter 4 focuses on the cyclical pathways of matter (phosphorous, nitrogen, sulphur, carbon and water) and how humans intervene within these cycles.

Test preparation:

1) Thoroughly read Chapter 4 (It is expected that you have already finished reading Chapters 1, 2 and 3)
2) Answer the following questions related to the required reading below as concisely as possible. (Some questions may require more text than others).
3) You are not expected to hand anything in, however doing this test preparation will help you get a better fall test mark.

Chapter 1 – Environment, Resources and Society

a) In your own words define both environment and resource. (/2)

b) Contrast between an anthropocentric view and an ecocentric (or biocentric) view. (/2)

c) Why is science important for both management and decision making? (/3)

d) What is a system, and why are they important to understand? (2)

Chapter 2 – Energy Flows and Ecosystems

a) Define the term energy, and discuss the two laws of thermodynamics. (/5)

b) Differentiate between a producer and a consumer with respect to how they obtain energy, and their role within a food chain.

c) How do the abiotic components of a region influence the biotic components?

d) How many ecozones exist within Canada? Which ecozone is Ottawa situated in?

e) What is the difference between specialist species and generalist? Define biotic relationships such as predation, parasitism, mutualism, and commensalism.

f) What is a keystone species?

Chapter 3 – Ecosystem Change

a) In your own words, provide a brief description of ecological succession. What is the ultimate goal of ecological succession? (/4)

b) Identify the difference between primary succession and secondary succession. (/2) In the case of a forest fire or an avalanche, what type of species will first colonize the disturbed area (i.e. primary or secondary species) and why? (/2)

c) Urbanization and other anthropogenic disturbances have been identified as maintaining an area in early successional stages. What implications do these have on the biodiversity of the disturbed area? (/1)

d) What is an alien or invasive species? (/1) Using some examples from the text, what environmental or socio-economic problems have occurred as a result of invasive species? (/4)

e) Differentiate between a negative feedback and a positive feedback and provide an example of each (from the text or lecture). (/4)

f) Discuss the general trend between population growth and its associated carrying capacity. Include a diagram and provide a brief description. (/3)

g) How does the genetic diversity of a species relate to its ability to avoid extinction? (/3)

h) From a management perspective, why do you think understanding the dynamics of ecosystem change is important? (/4)

Chapter 4 – Ecosystems and Matter Cycling:

i) What is the difference between energy and matter? (/2)

j) Biogeochemical cycles are known to continuously move six different nutrients between different layers of the ecosphere. What are these six different nutrients, and which one is considered a micro-nutrient? Of the six nutrients, pick one, and provide a description of how it is transported among the ecosphere. (A diagram may help you in your explanation.) How do humans interfere with this cycle? (/7)

k) Using an example for each, what is the difference between a gaseous cycle and a sedimentary cycle? (/2)

l) In your own words, briefly state 5 unique properties of water and why they are significant to Earth's systems. (/5)

m) What is eutrophication and how does it affect aquatic systems? How have humans intervened with the systems to lead certain bodies of water towards eutrophication? (/4)

n) How is acid deposition caused? Provide one example of how it affects environmental and socio-economic systems? (/3)

ENST 1001 – Introduction to Environmental Studies

Assignment 5 –Communicating an Environmental Issue

Due Dates: Nov. 10-13 (paper proposal), Nov. 17-20 (first draft), Nov. 24-27 (editing feedback), (all of the above are for paper copies, due in **your** tutorial); Dec. 7(final paper, submitted electronically through cuLearn, same due date all students).

Evaluation: 15% of your final grade (60% of the tutorial assignments mark)

A big challenge in resource and environmental management is communicating scientific knowledge to the general public. This is because a large percentage of the public may not completely understand science and how it is conducted, the nature of uncertainty, and the complexity of decision-making. The motivation to communicate scientific knowledge to the public is to create awareness, develop a basic understanding of a particular issue, and in addition to motivate action (Dearden and Mitchell, 2005). One common method of communication is to provide reading material (be it through a publication or online) that summarizes an issue in a concise, well-structured way. A well-written document is more likely to convince the reader that the science is true, there is an issue, and something needs to be done.

This assignment is intended to develop and assess your writing style, and your ability to communicate through text. With the knowledge that you have already gained from this course and some further research, you should be able to communicate the science behind an environmental issue and convince the reader that something needs to be done. You have the option to choose from a list of topics or create your own.

The Assignment

1) Using our discussions in class so far, choose an environmental system, and think about the current challenges to that system caused by rapid environmental change. Your report should concisely explain the impacts of this change (why should we care?), and the current state of our ability to mitigate these changes (what can we do about it?). Include a discussion of the scale of both the change and our potential responses, in both space and time. You have complete freedom on your selection of a specific change to talk about, but your TA will help you decide, in week 1 of this assignment, on an appropriate scope for your discussion.

2) Depending on your topic the structure of your report may vary, but at a minimum it should provide a summary of the environmental system(s) and how they are being altered. How have the systems changed and what impact have humans had? Your report should state who/what is being affected and to what extent, and provide an explanation of what could be done to mediate the issue. In some cases, past management might be the cause of your environmental issue. If so, discuss how management practices should be altered to reduce future complications.

3) The final report should be between 500 – 1000 words (2 – 3) pages exclusive of any graphs and figures, typed with 12 point font, double spaced, one inch margins, and include your NAME, student #, course code, and date of submission. (There is no need for a separate title page. Include this information on the top right hand side of the first page). Your report should also include a concise title and a list of works cited. Figures may be useful but are not required.

4) There will be three parts to this assignment: a structured proposal, first draft with peer editing, and the submission of a final draft.

Pages 135 – 148 in your text outline two environmental issues, eutrophication and acid deposition. Reading these summaries may help you to get an idea of how to structure your report

Itinerary for this assignment and associated tutorials:

Week 7 (Oct. 20-23) – Assignment overview
Week 8 (Nov. 3-6) – Proposals and library research discussed
Week 9 (Nov. 10-13) – Proposals submitted, plan document structure and next steps
Week 10 (Nov. 17-20) – First full drafts due to be exchanged for peer and TA editing
Week 11 (Nov. 24-27) – Editing of your partner's paper due, discuss in tutorial
Week 12 (Dec. 1-4) – Keep working on paper, journal article search/citation refresher
Week 13 (no tutorials) – Final paper due last day of term (Dec. 7th)

Week 8 topic - Proposals: (Due Nov. 10-13 – must be typed and brought to tutorials)

The intention of this proposal is to make sure you are on the right track with your report. A structured plan will make writing easier, and most likely help you to communicate your environmental issue more thoroughly. Your proposal should outline your environmental issue and how you plan to structure your report.

Within your proposal, you should include the following sub-headings:

Title
Research objective and background information
Structure of report
Works Cited

Title:

Choose a title that summarizes your report using a few words or a short sentence. (This is a tentative title that you might want to change when you are finished your report.) Pretend that this report is going to be published in a newspaper or magazine. A catchy or creative title may grab the attention of the intended audience.

Research Objective:

Provide a summary of your research objective by stating the environmental issue you will be focusing on, and the system(s) being affected. In addition to this, briefly describe how these systems are being affected; and how we (humans) are interfering with their

integrity. Your report should also describe who or what is being affected, and what could be done (or what is being done) to help mediate the environmental issue. If applicable, briefly outline how poor management has resulted in your chosen environmental issue (alternatively, what is being done that is helping to manage the issue).

Proposed Structure of report:

Briefly describe how you plan to layout your report. If you choose to use sub-headings, list them in the order that they will appear in your report with a brief explanation of what you will discuss under each sub heading.

Works Cited:

Provide a list of the references that you will be using for your report in proper works cited format (see instructions below). This will force you to collect your research as early as possible, and your TA and peers can help to verify that your formatting is correct. Your final report should make use of **at least 4 sources.**

You may use the course textbook as one of your sources, as well as web sources, but you are expected to make use of at least one other reference from either a book or journal article. If you use a source from the web, make sure that it is a valid source. Information from authoritative websites such as Environment Canada or other recognized institutions are valid, but a website titled, for instance, "Rick and Megan's Wicked Cool Environmental Awareness Website" would not be considered valid for an academic reference.

It is also important to note that Wikipedia should not be directly sourced in your report. Although the information may be valid, the various authors on this website may not be recognized academically. You can however use Wikipedia to get your research rolling by reading the posted information for your keyword searches. At the bottom of each Wikipedia search is a list of references that may be of use to you. You can make note of these references and find them either on the web or at Carleton's library.

Works Cited Instructions:

For any academic writing it is very important that you give credit to the sources you use. Whether you quote someone else or even just use their idea, their work needs to be referenced, otherwise it is considered plagiarism. This is a serious academic offence that in some cases may cause you to FAIL a course, or worse. With that in mind, take the time to consider the proper methods to reference your sources:

See http://www.library.carleton.ca/howdoI/plagiarism.html for more information explaining plagiarism, and how to avoid it.

You can use any citation method that you are familiar with (footnotes, or embedded references), but it is important to use it properly and consistently throughout your report.[10]

Two frequently used citation systems are referred to as the American Psychological Association (APA) and the Modern Language Association (MLA).

[10] Reference management software can be useful for helping to consistently format citations – see the previous discussion of these in assignment 7, on page 40, and/or ask your TA about these options.

Both citation styles reference any idea or a quote within a written document by using embedded parentheses. This way the reader can quickly turn to the works cited list at the end of your report to view the complete publication information. For instance, if you were using the text book as one of your sources, and in your report you write…

…. Nitrogen is an important macronutrient since it is required by all organisms for life. This is because nitrogen is an essential component for chlorophyll, proteins and amino acids (Dearden and Mitchell, 2005).

The above embedded reference is using an APA style of referencing. If you chose to use MLA the embedded reference would be: (Dearden and Mitchell, 112). While APA emphasizes the year of publication, MLA emphasizes the page from which the idea or quote was found (note that the period comes after the closed bracket).

After a reader has read the above statement about nitrogen, they can see that it is credited to both Dearden and Mitchell (the authors of your text book). The reader can then flip to the works cited list at the back of the document to see the full publication information.

The works cited list is arranged in alphabetical order using the primary author's family name.

It is also a valid method to reference a source at the beginning of a statement, quote or idea, in the following examples we switch both between citing within the statement versus at the end of the sentence, and also between APA and MLA styles:

According to Dearden and Mitchell (2005), nitrogen is an important macronutrient since it is required by all organisms for life…….. (APA style)

Or

According to Dearden and Mitchell, nitrogen is an important macronutrient since it is required by all organisms for life. (112)…….. (MLA style)

Formatting of publication information for different types of sources:

APA:

1) Book[11]:

Author's name. Year of Publication. Title of book. Other Publication information (Location and Publisher)

[11] Note that these book citation examples all are pointing at a PREVIOUS version of our textbook. If you cite the text book, make sure you are using the right information (we are using the 4th edition, published in 2012)

Dearden, P. & Mitchell, B. 2005. Environmental Change and Challenge: A Canadian Perspective - Second Edition. Toronto: Oxford University Press

Embedded reference: (Dearden and Mitchell, 2005)

2) Journal Article:

Author's name. Year of Publication. Title. Publication information (Title of Journal, Vol #, and pages)

Scott, C. 1998. Sampling Methods for Estimating Change in Forest Resources. Ecological Applications, Vol. 8, No. 2, 228 – 233

Embedded reference: (Scott, 1998)

3) Web Sources

Author's name (May be an institution instead if no specific author is provided).Year of publication. Title of documentation and/or Title of Website. Date website was accessed, URL

Environment Canada. 2006. Monitoring, Accounting and Reporting on Greenhouse Gases. Retrieved August 15, 2008, from http://www.ec.gc.ca/pdb/ghg/ghg_home_e.cfm

Embedded reference: (Environment Canada, 2006).

MLA:

1) Book:

Author's name. Title of book. Publication information (Publisher, Location, Year)

Dearden, P. and Mitchell, B. Environmental Change and Challenge: A Canadian Perspective – Second Edition. Oxford University Press: Toronto, 2005.

Embedded reference: (Dearden and Mitchell, 112)

2) Journal Article:

Author's name. Title. Publication information (Title of Journal, Vol #, Year, and pages)

Scott, C. "Sampling Methods for Estimating Change in Forest Resources." Ecological Applications Vol. 8 No. 2 (1998): 228 – 233

Embedded reference: (Scott, 229)

3) Web Sources

Author's name (May be an institution instead). "Title of documentation" and/or Title of Website. Publication information, Date website was accessed, URL

Environment Canada. "Monitoring, Accounting and Reporting on Greenhouse Gases" 17 Nov. 2006. The Green Lane. 15 Aug. 2008
<http://www.ec.gc.ca/pdb/ghg/ghg_home_e.cfm>

Embedded reference: (Environment Canada, 2)
***For more information on the proper citation methods please see
http://www.library.carleton.ca/howdoI/citing.html ***

Some Writing Tips

1) The most effective writing is structured according to a plan. At one level, the whole document should be planned out to maximize effectiveness; you will be taught about the "mind mapping" technique to help with this, and to help organize material. And then paragraph by paragraph, while writing your report remember to '**PEE** on the page'. That is, every time you make a **P**oint, provide some **E**vidence, and then an **E**xample.

For example:

Point – Nitrogen is an important macronutrient
Evidence – it is required by all organisms for life
Example – it is an essential element for chlorophyll, proteins, and amino acids

Generally, if a point is not supported by some evidence and or an example, the reader is left confused and asking too many questions. If you want to maintain the readers' attention, confusion should obviously be avoided.

2) Your report should have some sort of intro to set the scene for the reader. (i.e. what to expect of the report before the reader really gets into it).

3) Try not to repeat your statements. At times it is good to emphasize a point, but if it is done too much it becomes redundant and the reader loses interest. The power of your argument may also be diminished by repeating yourself.

4) Take the time to edit your work, and then edit it again. When you are done editing your work, edit it again……

Week 9 (Nov. 10-13) – Discuss proposal, plan next steps

For this week you are expected to have completed your proposal for your report. It is encouraged that you discuss with a partner what you are going to write about, and how you are going to do it. Your TA will go over your proposal with you and offer some initial feedback, and approve your topic or discuss alternatives. You should plan your paper's structure.

Week 10 (Nov. 17-20) – Submit first drafts (2 copies)

Your TA will have read your proposal in more detail, and may have additional feedback that will help you improve your academic writing. You will submit one copy of your draft to your TA, and another to a classmate. Form partnerships for exchanges of your full drafts, to be discussed next week. By next week, you must read your partner's draft, mark it up with meaningful feedback, and be ready to discuss it with them.

Week 11 (Nov. 24-27) – 1st Draft of Report discussed with partner and TA

In the tutorial session, you will discuss each others' drafts and offer constructive criticism (i.e. what was good, but also what could be done to make the paper even better) for your partner. Your TA will circulate to each partnership, and ask you to discuss with them the current strengths and weaknesses of the two papers, and what you have discussed in terms of improving them. **You will be graded on the quality of this discussion**.

Week 12 (Dec. 1-4) – Continue work on Paper

In the tutorial, you will form groups and get ready for Assignment 6 and the term project for next term. Work on this assignment continues, and there will be time to ask your TA questions about final editing and improvements.

December 7th - Hand in final paper (cuLearn)

Marks Breakdown (5% of total earned mark deducted for every day a submission is late)

The overall final assessment will be worth 15% of your final course grade. To obtain this mark, the TAs will evaluate the following, using the criteria on page 6 of this coursepack:

1) **Proposal** – /2.5
- should be typed and include student information
- should demonstrate that your background preparation is valid and complete

2) How effectively did you **participate** in the process of writing this paper, through tutorial discussions and peer editing of drafts? About 17% of the mark (2.5/15) is reserved for this assessment.

3) The **final paper** will be assessed and graded out of 100, using the following breakdown, then converted to a mark out of 10:

Effective Communication – /50
- final report communicates content in an efficient and effective way

Structure, Spelling and Grammar – /30

Works Cited – /20

Introduced: Week 12, Term 1
Discussed: Week 13, Term 1 (lecture), and Week 1, Term 2 (tutorials)

ENST 1001 – Introduction to Environmental Studies

Assignment 6 – PowerPoint Presentation

Date Due: Files are due **the day BEFORE your** tutorial group, present on Jan 19-22, 2016
Evaluation: Worth 2.5% of your final grade (about 8.3% of your project)

The purpose of this assignment is to develop your oral and visual presentation skills, and get you thinking about your term project (see the next assignment in this coursepack). Each tutorial will be divided into groups of 3 or 4, and each group will be responsible for delivering a presentation on an environmental mission that you and your group are all interested in. (Be sure to get into groups that you will be comfortable working with for all of term 2.) Your presentation at the first meeting in January will give you the opportunity to receive feedback from your TA and peers to help you refine your term project ideas, which will eventually be submitted as a written proposal. It is suggested that at least one group member should be familiar with PowerPoint, but if extra help is needed your TA will provide additional support.

The Assignment:

Your presentation should outline the environmental issue(s) that concern your group and a realistic objective that may help to mitigate it (your environmental mission). Your mission could focus on a local issue in Ottawa, or within your university, but you are not restricted to this. It will be up to your group to decide how to present the material and how to divide up the workload amongst the group members. Your group's presentation will be restricted to 10 minutes in length, and therefore you do not have very much time. Try to develop a good concise summary of your environmental mission drawing from the course material and/or other sources, and practice your presentation to see if you can comfortably complete it within 10 minutes. A concluding slide at the end of your presentation should provide the audience with an environmental mission statement. This is a statement that summarizes your overall objective.

To give you an example, a Clean Ocean Program (COP) in California has posted the following environmental mission statement to help summarize their goals and objectives:

> "The Clean Ocean Program's mission is to protect and preserve public health and the environment through education and implementation of activities to reduce urban runoff and stormwater pollution and to promote waste reduction and recycling from industrial, commercial, municipal, new development/construction and residential areas."
> *http://ci.san-clemente.ca.us/sc/standard.aspx?pageid=492*

This mission was supported by the following goals:

· To protect streams, the ocean, shoreline/beaches, and reef ecosystems from pollutants.
· To promote City-wide participation in readily available recycling programs.
· To provide comprehensive pollution prevention and solid waste reduction education to promote community awareness and environmental stewardship.
· To achieve and maintain compliance with all applicable local, State and federal environmental laws and policies regarding surface water protection and solid waste reduction.
· To enforce local surface water quality and solid waste regulations, including the municipal code.

At this point in the course you probably realize that to meet such goals an understanding of the systems involved is important to help make informed decisions and to improve our management abilities. In order to convince the audience that your environmental issue is an important concern, the systems involved may need some explanation. What changes have been made to the systems, and what are the anticipated risks? Your presentation should follow a logical structure and clearly state your environmental mission.

More on missions and communication strategies
There are many semantic debates over what is a *goal*, *objective*, *mission* or *strategy*. *Plan* and *strategy* are very similar as each consists of: (1) goals or objectives first (what is to be done), and then (2) actions to achieve those goals. The mission example above has both objectives and actions (which is fine).

A *communication strategy* starts with *goals*, then *target audiences* (who will achieve goals), then *messages* to audiences, then *mechanisms to deliver* those messages. More about communication strategies will be explained during the lectures and tutorials, to assist you with this assignment and the upcoming Major Project.

PowerPoint Presentation Tips:

1) Make sure that your font sizes can be read from a distance.
2) The colour of your font is also important. Yellow font for example on certain background colours can be very difficult to read. Think about the contrast between the colours of your text and the background. Remember that usually contrast is worse up on a screen than it appears on a smaller computer monitor
3) It is recommended that you limit the amount of text you put on each slide. The audience should have time to read the slide without being distracted from what the presenter is saying.
4) Practice your presentation carefully to make sure you have an appropriate amount of content. Some people find a "1 minute per slide" rule handy, meaning that you only want roughly 10 slides for 10 minutes. But other people incorporate some slides that have useful graphics that can be interpreted in less than a minute – if there's nothing else on that slide, then of course more slides of this nature can fit in. Find your own

balance, but make sure you are not rushing through the slides just to meet the time limit – your audience should be following your message without feeling rushed
5) Avoid reading directly from the slides. Maintain eye contact with the audience, and try to use your slides as a guide to what you will talk about.
6) Practice your presentation and get the timing down.
7) Avoid excessive use of the animation "tricks" that presentation software offers you. Too many special effects distract your audience from what you're trying to say, and it can become annoying for them.
8) Have fun with it!

A storyboard planning sheet has been provided below, to help develop your presentation.

Assignment Itinerary:

Term 1 Week 12–Dec 1-4 – Form groups of 3 or 4, brainstorm potential topics and begin developing your presentation plan. Make sure that you and your group are comfortable with developing a presentation using PowerPoint. Mini PowerPoint lessons will be offered in tutorial. Each group is expected to sign up for a presentation date with your TA before the end of tutorial. Presentations will take place in the first week of the second term, so although there is no December exam in this class, it is important to maintain communications with your group partners, to be ready to present an excellent presentation in January.

All presentations will be due the **day BEFORE your January presentation date, and should be submitted to your TA through cuLearn. This will allow them to have the files pre-loaded onto the classroom computers when your tutorial begins. 10% will be deducted if your PowerPoint/PDF file is late**

Evaluation: (worth 2.5% of your final mark)

Your presentation will be marked out of 20, based on:

Presentation style (50%):

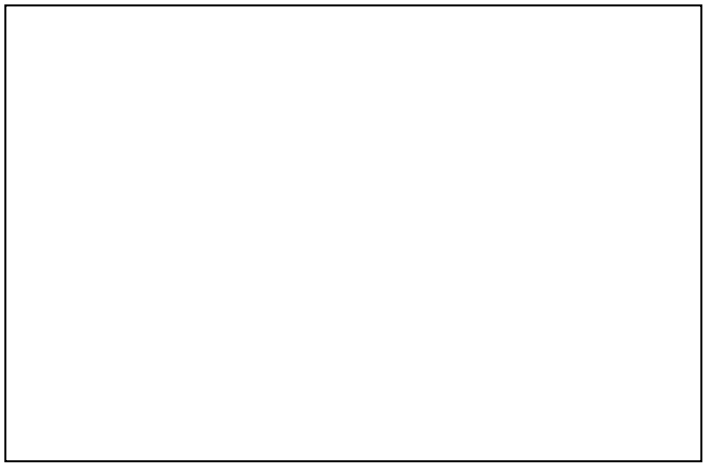
-clear and effective vocal communication	/4
-clear and effective visuals (slides)	/4
-meeting the time limitation	/2

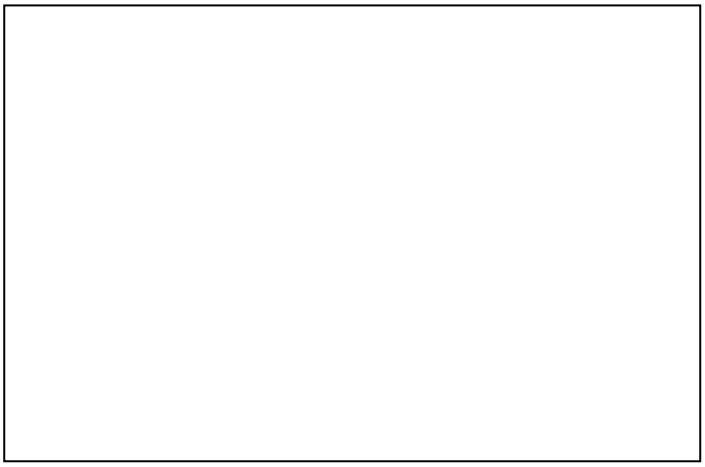
Content (50%):

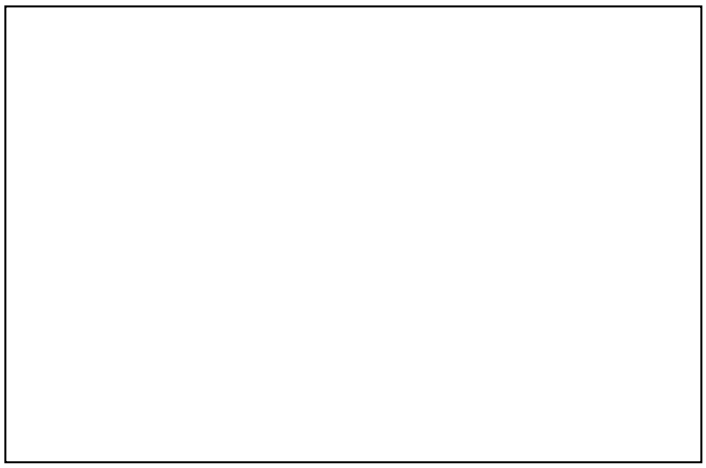
-Outlines the systems related to the environmental issue(s) of concern	/4
-Clear and effective explanation	/4
-Concise concluding mission statement	/2

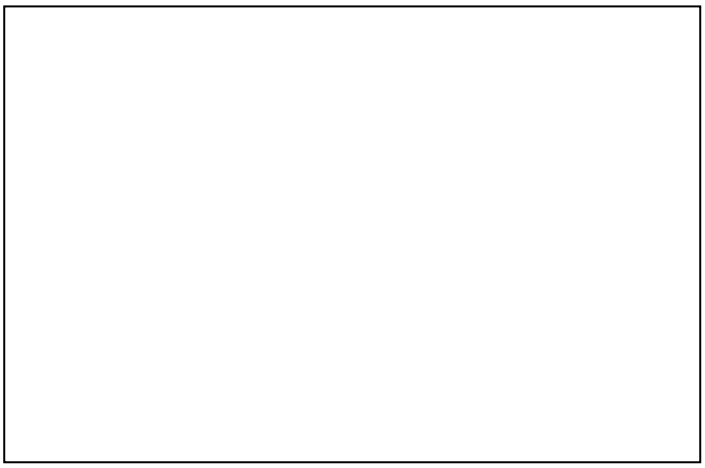
10% will be deducted if your slides are emailed late. Everyone in the group will receive the same mark.

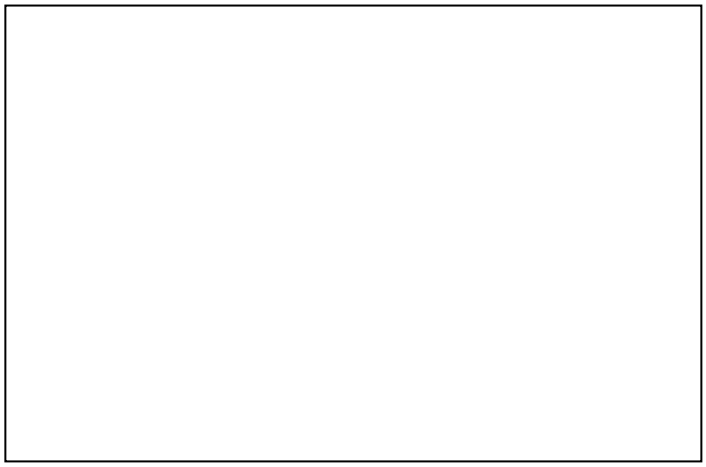
PowerPoint Presentation story board:

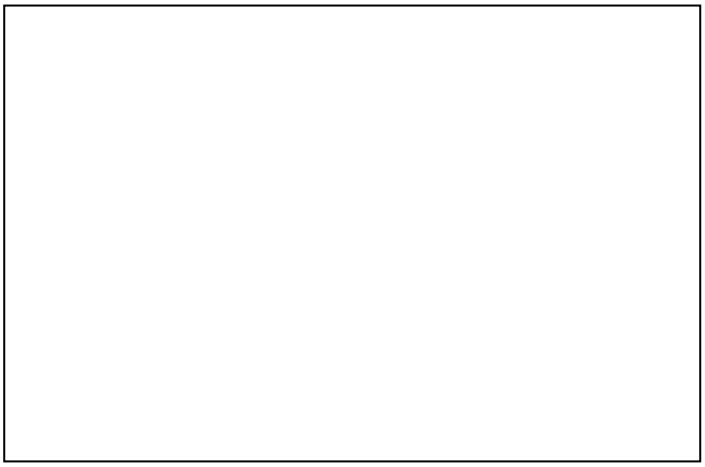


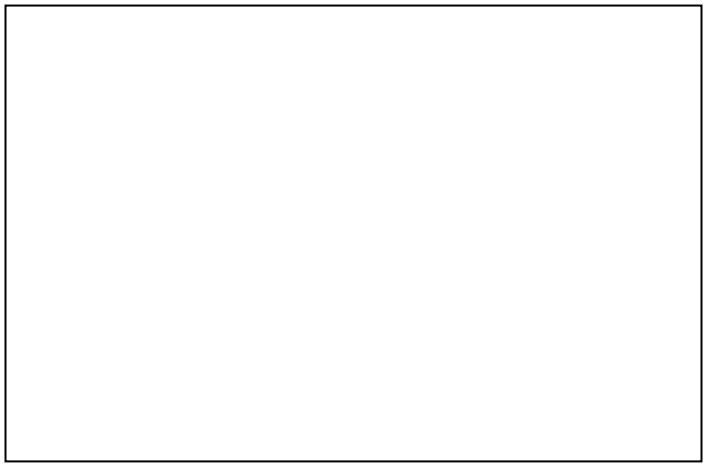
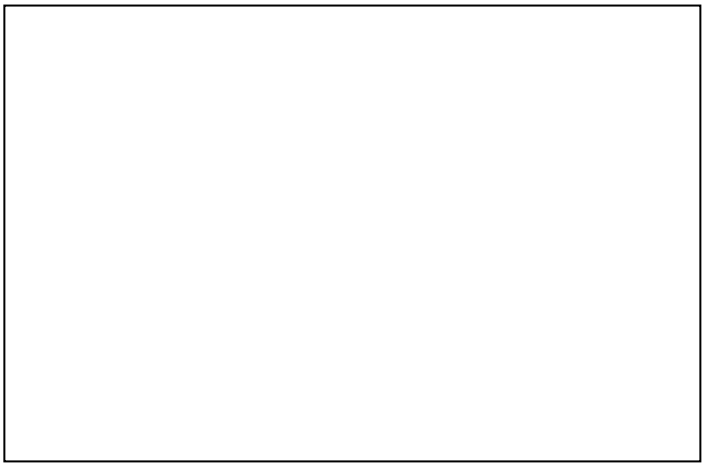
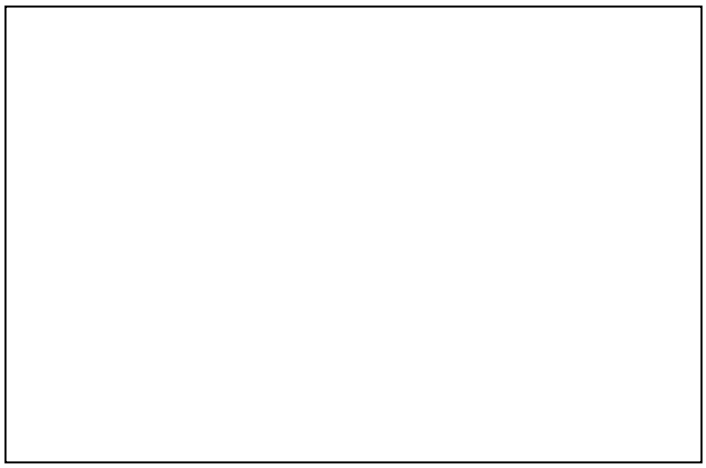
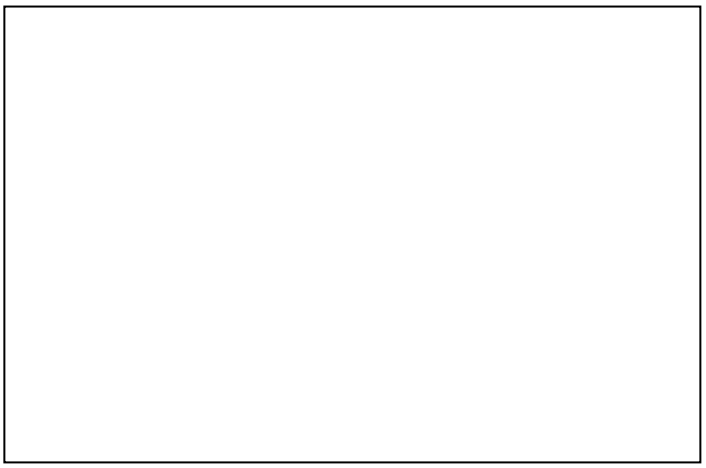
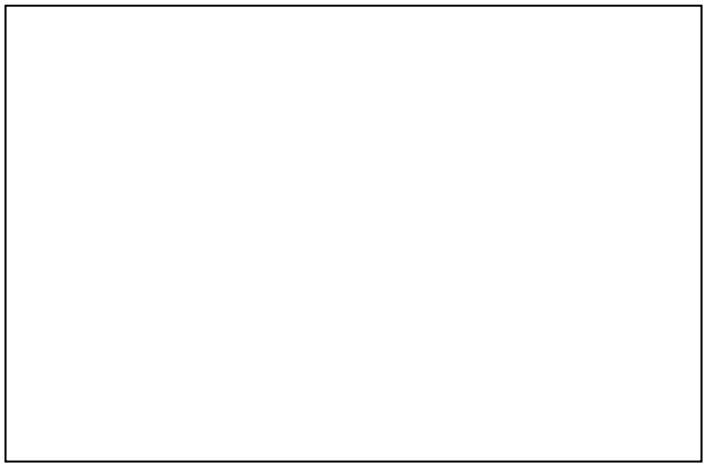
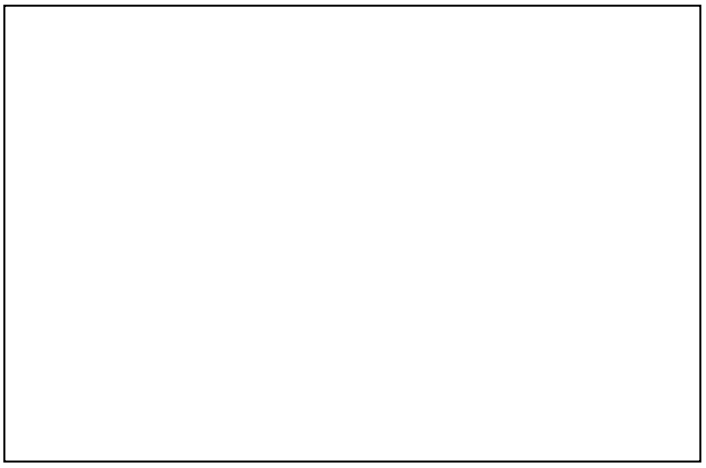










ENST 1001 – Introduction to Environmental Studies

Major Project – Saving the Planet!

Due Dates: April 1 (communications product) and April 8 (all other deliverables)

Evaluation: The components described here are worth 27.5% of your final course grade, made up of an individual component (7.5%) and a group mark (20%). See below for details. An additional 2.5% of your final grade comes from the oral proposal presentation (Assignment 6).

Your major responsibility in tutorials in the second term will be this group project. The aim is to have you engage in an environmental issue, do some primary research which will advance our understanding of the issue, and communicate your findings, to help us work towards a sustainable future. You have a lot of freedom in what you choose for your project's mission and goals (see Assignment 6), but your discussions with TAs in the tutorials will help to define an appropriate scope to make sure your ideas are feasible. Your instructors have applied for course-wide ethics approval for projects that involve human subjects in specific, low-risk manners; if you intend to study humans using approaches that fall outside of those pre-approved, you will need to obtain additional ethics clearance. This will be explained in the last class in December.

This document is an introduction to your major second term project, but will be introduced before the term break, so that you can begin thinking appropriately when you are designing Assignment 6, and talking to your group-mates between fall and winter classes.

Your responsibilities

- work effectively and cooperatively in the groups you formed at the end of last term
- take the ideas developed in Assignment 6 (altered, as necessary) and develop a proposal document, including an ethics application for any project which surveys human research subjects
- develop a specific work plan with your group mates to collect the required information, analyse it appropriately, and decide upon and create appropriate and effective ways to communicate your findings (see below for the minimum requirements)
- summarize your work with a press release, individual journals of the activities you undertook to execute this project, and a brief oral report to the class
- one major product which communicates your findings to your target audience (identified by your group, in consultation with your TA)

Proposal (2.5 of the group project marks)

The purpose of a proposal is to explain the origin, worthiness, and scope of the research question, as well as to explain how the question will be answered, and convince the reader that it will be a feasible project. In this case, it will also be used to collect information

for our class ethics approval application. You should begin discussing your ideas in your groups as the first term ends, following on from your Assignment 6 presentations. The first two weeks of tutorials in January are dedicated to finalizing the details of the proposed work, and presenting them in a proposal document. If necessary/preferable, you can redefine your mission statement and goals at this time, based on feedback from your presentation in the first week of January.

The proposal document itself should include the following sections:

Introduction

- no more than 1.5 pages
- state the environmental issue you're concerned with, and explain briefly why it is important
- what are you testing in your research?
- what are your specific research objectives and questions?

Methods

- no more than 2 pages
- explain what you are going to do to gather the information needed to answer your research questions
- as discussed in class, if you are going to involve human research subjects, you will probably need to do a research ethics application, using separate forms we will provide; these forms are separate from this proposal, but you should mention, if applicable, that you are obtaining all relevant ethics approvals
- how will you analyse your data?
- how will you communicate your findings, and to whom?

Anticipated Results and Timetable

- no more than 1 page
- what are your initial ideas about what you may find?
- what is the timetable for each week of your planned project? Who will do what?

Based on the above plan, you are also required to submit a research ethics declaration, which will specify one of the following three options:

a) no research involving human participants will take place, therefore ethics clearance is not necessary;
b) all research activities will fall within the scope of the course-wide ethics approval obtained by the course instructors;
c) all research activities fall within the scope of the course-wide ethics approval, but there will be data collected in the field and we are providing a "Safety Statement" outlining how and when data will be collected, and how safety of surveyors will be taken into account (your TA will guide you on whether or not this is needed); or
d) the proposed research activities fall outside the scope of the course-based approval, but the group will consult with Leslie Macdonald-Hicks in the Research Office, to have their research plans approved prior to collecting data.

Please submit this declaration on a separate page, including your group ID and all group member names, so that your TA can remove that page from your main proposal and give it to the course instructors. The ethics information will not be marked, but submitting the form is mandatory in order to receive a grade for this project, and is also required by the regulations of the university if you are going to perform any research on humans.

Individual Weekly Project Work Logs (worth 5 of the individual marks, due April 8)

Throughout all stages of your project, every student should keep track of work done towards the project in their own journal, on a weekly basis. We suggest creating a table which summarizes the major tasks completed each week, both in terms of work you did on your own, and in the group. This can be accompanied by explanatory text, and anything else you feel should be communicated to the TAs. You should also use the rough version of this journal as a planning tool throughout the term, to make sure the group is keeping up with the project objectives.

Do not forget that this portion of the project is an **individual submission**. You must keep records and produce these journals yourself. We recognize that it may be valuable to compare notes with your group mates to keep track of what was done through the term, but you must make sure that none of you submits any copied information. **Any material in the journals that appears to be copied from a group mate will result in those journals being submitted to the dean's office to be evaluated for plagiarism penalties.** Please don't make that necessary.

Major Communication Product (group: worth 10 of the group project marks)

This is the most flexible portion of your project requirements. You will design an appropriate method and media for presenting your findings to whatever audience you have chosen. The audience you are targeting could range widely, but should be appropriate to the objectives of your project. Examples include "Carleton students", "residents of Old Ottawa South", "Canadians who care about green space", politicians / decision-makers, educators, etc. Presentation methods could be, but are not restricted to, a web site, a brochure, lesson plan(s), presentations to city council, an advertisement campaign, a physical model, or even, for the traditionalists, an academic paper. Note that this is the largest portion of your grade, and should be viewed as the most important product of your project – therefore it should be planned for right from the proposal-writing stage. Because of the variability of possible deliverables, **how and when these products will be evaluated will have to be negotiated with your TA, but unless otherwise arranged, it should be completed by April 1**.

Press Release (worth 7.5 of the group project marks, due April 8)

As we discussed in Assignment 5, it is important to be able to communicate our ideas to a wide audience. The purpose of the press release is to present your research project's goals, findings and how you presented them in your "Major Communication Product", in a summarized fashion aimed at the general public. This should be no more than 1-1.5 pages, single spaced, written in clear language using proper paragraph form. Examples of press releases will be provided in tutorial.

Class Presentation (no grades assigned, but it is mandatory to give this presentation in order to receive a project grade, and quality/participation will be reflected in your individual participation score) - presentations given on April 4

Each group must be ready to give a brief, informal, oral report to the class, on March 30, on the goals of the project, how it was accomplished and communicated, and what was learned.

These presentations should take less than 5 minutes, can be given by whatever combination of group members you deem appropriate, and should be primarily considered an opportunity to report back to, and hear from, the rest of the class. Audiovisual support will be available if that will help you (in this case, please email Scott or Paul with your requirements on or before the previous Thursday, March 26).

Individual project participation: 2.5 of the individual participation marks will be assigned based on a combination of your TA's notes from tutorial meetings, and conclusions reached based on them reading your individual work logs and a group questionnaire distributed near the end of the course.

Note: More support will be given around communication strategies during this part of the course, through lectures and/or tutorials. For example, this can help in identifying what media or communication product best suit what target audience.

ENST 1001 – Introduction to Environmental Studies

Assignment 7 – Journal article search and summary

Due Date: February 26, 5 pm, to cuLearn

Evaluation: 2.5% of your final grade (10% of the tutorial assignments mark)

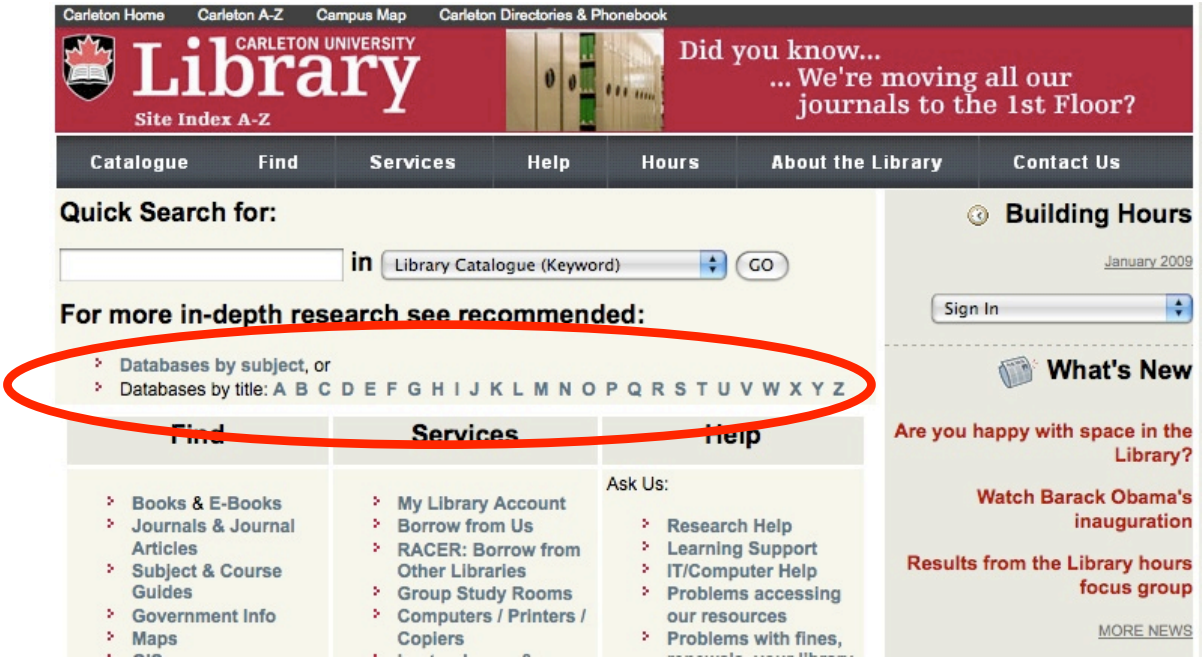
In this assignment you will practice searching for, accessing and using scholarly articles for research. Scholarly articles are almost always peer reviewed. This means that a specialized editor and two or three (usually anonymous) expert reviewers have evaluated and commented on the article, and the author has had to consider and respond to these comments before it is published. This means that the work in the article is recognized by peers of the author as being high quality, rigorous research and that the results can be relied on by other researchers. Because the reviewers do not ordinarily know who the author is, and the author does not know who the reviewers are, the risk is reduced that some authors might get their work published for political or other non-scientific reasons (e.g. if a famous professor writes a poor-quality article). We encourage students to use peer-reviewed research because of this quality control. Articles in the popular press (newspapers and magazines) and on the web (Wikipedia) may also be of high quality – but the level of quality control and trust in those articles is not as high – if you use these materials you must be vigilant in judging the "weight" of their conclusions.

Journals are highly specialized – there are tens of thousands of journals that address every niche of human knowledge. Some prominent journals have been published for hundreds of years – you can imagine the number of individual articles that are available to today's researcher. In order to manage this volume and to find the very specific articles that meet an individual's specific research needs, we use research databases. There are hundreds of databases. Just as journals are specialized by topics, so are databases. To do an effective and complete search, it is important to select the correct database.

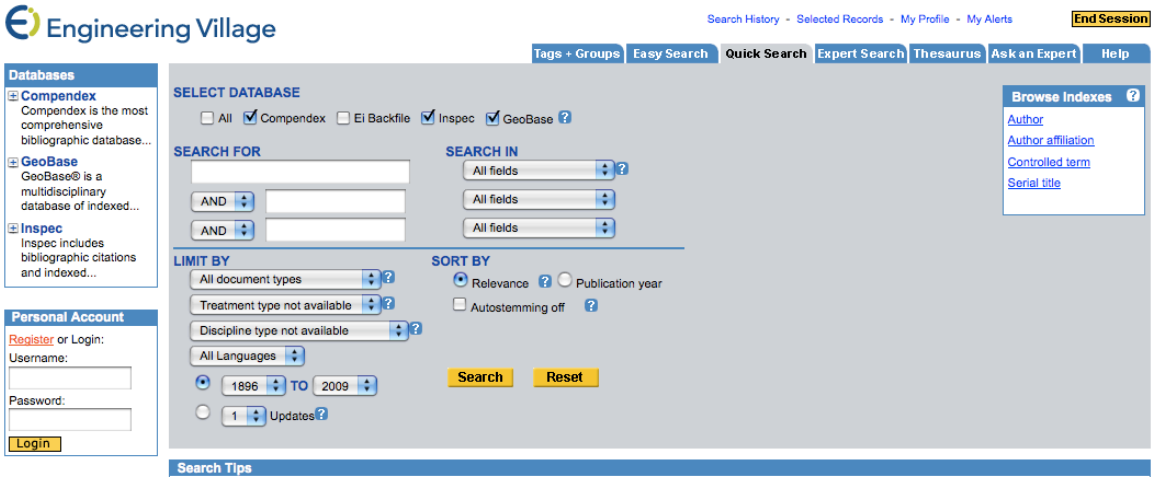
For the purpose of this assignment, you will use **Geobase**. According to the library website description: *Geobase provides citations and abstracts of journal articles, books, conference proceedings, reports, and dissertations in all areas of the earth sciences. Topics include: cartography, climatology, demography, ecology, environment, geography, geology, geophysics, hydrology, marine sciences, mineralogy, natural resources, paleontology, regional studies, remote sensing, tectonics, international development, and transportation.* This is one of the key databases that we use in geography and environmental studies.

There are two ways to access the databases. If you know the name of the database you are looking for, you can go to the library homepage and click the first letter of the database name in the line "Databases by title". If you don't know which one you should use, you can click the link that says "Databases by subject". You then click on the subject and get the web page for that subject, which lists all the databases recommended for that topic or

discipline. Generally, these pages start with a "Start here" or first choice database, which is the library's recommended database to begin your search.



Most databases have different interfaces, but they all feature a search screen that lets you enter search terms. You can use "Boolean logic" which includes the operators "AND", "OR" and "NOT" to include or exclude certain keywords. This lets you narrow your search to get the most specialized results possible (and avoid having to look at a huge list of potential articles).



Geobase's search interface

When you get your search results, you can often download them and read them as PDF files. If we do not have full text access to a certain journal, there is usually a "Get it" button you can press to get instructions on locating the article. If this is unclear or otherwise

problematic, take down the article details and consult the Research Help desk at the Learning Commons to get help locating the article. As well, there are links on the results page that let you "save references" or "e-mail references" so that you can get the bibliographic details for your records. It is a good idea to do this, even if you also download the whole article.

Bibliographic software can be very useful for organizing your references, both to create a database for future use, and for easing the creation of standardized citations and a bibliography / reference list in individual papers. Your TAs will discuss / demonstrate Mendeley and Zotero, two free programs that are recommended by our library, and in use by thousands of students and researchers around the world.

Journal articles can be long, technical and sometimes difficult to read. You can simplify the process by looking at the structure of the article. Every article begins with an abstract. This 200-500 word summary will give you an overview of the article and its results – this can help you decide whether the article contains information that you need. A typical structure for an article is: Introduction; Method; Results; Analysis; Discussion (IMRAD). This varies by discipline and journal, but knowing this structure can help you "parse" the article. For example, the introduction often contains a literature review and discussion of the field. So if you find an article that is very close to your interest, the introduction can give you an overview of the field and help you find other "foundational" texts that may also be useful. If there is a separate methods section, this is often oriented toward telling an expert audience how a research project was done. This helps them judge the quality and rigour of the research. This section may be more specialized than you need. The analysis and discussion likely contain the findings of the research that you can use to support your research.

The Assignment

1. Using the library website, this handout and the library handout "Looking for Journal Articles", access the Geobase database and conduct a search of a topic relevant to your research project.
2. Select 3-5 article citations that satisfy your search (just the entry, not the whole article) and use the "Selected Records" button to generate a list. Print this list and include it with your summary.
3. Choose one of the articles and acquire it (download it or get the paper copy in the library). Read the article and prepare a review (up to 500 words) that:
   a) succinctly summarizes the article;
   b) mentions the key results/findings of the article;
   c) situates the research by explaining how the article is relevant or useful (both to your current project and the broader research community).

Find Journal Articles in 5 Easy Steps

⇨ STEP 1 Click the **Databases by Subject** link on the Library's Web site http://www.library.carleton.ca

⇨ STEP 2 Click the **Subject** link that best suits your topic.

For example, if you choose Sociology you will find a list of recommended databases. Some provide citations to articles, others will provide summaries (called abstracts) or full-text.

⇨ STEP 3: Click on the **Database name** and enter your search in the box provided

Tips for Searching

- Connect keywords using AND. E.g. *cloning and humans*
- Connect synonyms with (OR). E.g. (*Indian* or native* or aboriginal* or indigenous or first nation**)
- Use truncation * to expand results. E.g. *canad** will search *canada*, *canadian* or *canadians*

Not enough articles?

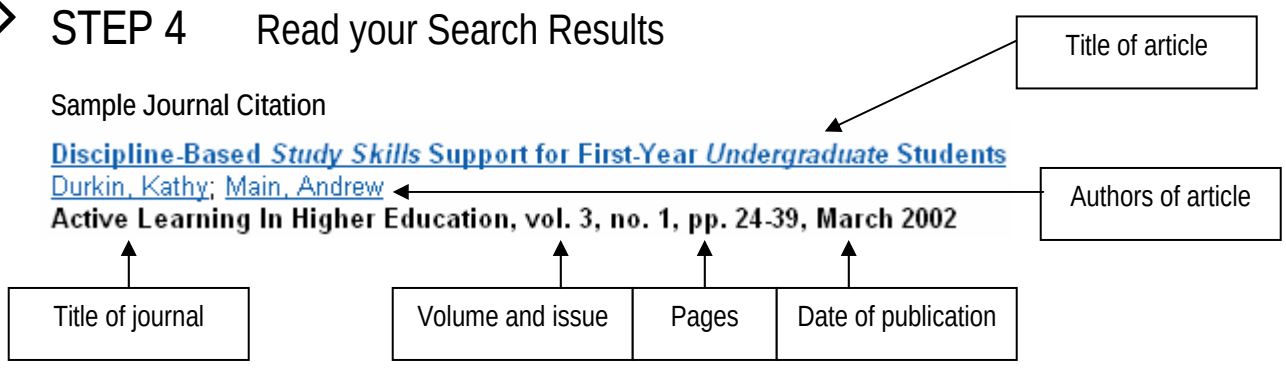
- Use synonyms and truncation to increase your search results. E.g. Try *(women or woman or female* or girl*)*
- Try broader keywords. E.g. search *media* instead of *television*.
- Search multiple databases in your subject area (because different databases might include different journals).
- Search databases from different subject areas (because many topics are multidisciplinary).
- Click on Descriptor terms (because you will often find more articles by using the database's own terms).

Too many articles?

- Add more keywords to make your search more specific. E.g. add a place, point of view, time period, or population.

⇨ STEP 4 Read your Search Results

Sample Journal Citation



Term 2, Week 9
Mar. 15-18

ENST 1001 – Introduction to Environmental Studies

Assignment 8 – Movie and Response

Due Date: March 21, 2016, 5 pm (to cuLearn)
Evaluation: 2.5% of your final grade (about 9% of the tutorial assignments mark)

The purpose of this assignment is to sharpen your note-taking skills, and to critically reflect on the concept of sustainability. You will be required to submit a 1.5 page, double spaced response to one of the two questions which will be provided in the class when the movie is shown. Your response should include content from the movies shown in lecture (on March 14), possibly content from lectures, and at least one additional source (textbook, Internet source, or journal article).

The films you will be shown are documentaries that present many issues related to sustainability, and the videos should teach or remind you about many of the issues we've talked about through the year, such as agriculture, sustainable design, urbanization, economic sustainability, water cycles, and pollution.

The Assignment:

Choose **one of the questions provided in the lecture,** and take notes on the movie with that question in mind.

****Depending on your response, both questions may require an explanation of the environmental systems involved. ****

Requirements:

1) You are required to submit a 375-500 word (1.5 - 2 pages, double spaced, 12 point font) response to the question you chose to answer. This response should include ideas, facts, or theories supported by not only the movie, but also 2 additional relevant sources. You may use the textbook for the course, the posted lecture slides, a journal article, or a web source.

2) Your response should follow the format of a short (but very convincing) essay. You should start your essay by introducing the main theme of the essay using some background information. Specifically, you should clearly state what you will be talking about for the remainder of the essay. The bulk of the essay should follow a logical format to emphasize the major points you have in mind. Finally, a concluding paragraph will help to summarize your discussion, and recap these major points.

Evaluation: Grades will initially be assessed out of 30, then converted to be worth 2.5% of your overall final grade:

Formatting, spelling and grammar:	/10
Sources and works cited:	/5
Structure and argument:	/15