

SCIN 1010: Climate Change, Global Warning? **Webster University, Leiden, The Netherlands, 2009**

Class Outline and Activities

Each day of class will be divided into lectures (my own and some guests), discussion, and at least one more hands-on activity. The general format for each day will be as follows:

Lecture: 1 Hour (30-40 slides)
Questions: 30 minutes throughout
(Sometimes) Film and/or Guest Lecture: 1 Hour
Break: 15 minutes
Activity: 1-1.5 hours
Tomorrow Review: Homework & Reading

Below you will find descriptions of both the final project(s) and each day's activity.

Final Project(s): Climate Outreach

As a part of the final project and presentations, students will be developing presentations and outreach materials to help local communities become more "climate conscious". They will also be visiting various locations (i.e. elementary school, local business, university administration, & local communities) to conduct discussions on topics covered in the course. Students will be working in groups for the final project and will be expected to equally participate in group work. Furthermore, students will select topics/groups the first day of class and will be expected to be accumulating information for their final project throughout the class (it is expected that much of the material from homework assignments will be useable for the final project).

Four Teams:

1. **Climate Science**-will overview climate science discussed in class and compile an annotated resource list of climate science websites.
****Data will be inputted into Climate Science Google Notebook***
2. **Climate Impacts**- will overview climate impacts discussed in class and compile an annotated resource list of climate impacts websites
****Data will be inputted into Climate Impacts Google Notebook***
3. **Climate Policy**-- will overview climate impacts discussed in class and compile an annotated resource list of climate impacts websites
****Data will be inputted into Climate Policy Google Notebook***
4. **Climate Solutions**- will overview climate solutions discussed in class and compile an annotated resource list of climate solutions websites
****Data will be inputted into Climate Solutions Google Notebook***

Climate Change and You! Booklet and Climate Change Outreach Project:

1. Final Project: Climate Change and You! Booklet

Final Booklet will be available on the class website and on the NYC Climate Coalition Website www.nyccclimate.org as a part of the final project and presentations, students will be developing a Climate Change & You! Booklet with information they learned in the course.

The goal of the Climate Change and You! Booklet is to help summarize and apply some of the basic science, policy, impacts, and action you have learned throughout the summer session, while helping to develop your research and outreach development skills. Students will develop, as a class, different sections of the Climate Change and You! Booklet, throughout the days of the course. In addition to the full class participation, students will work in groups of 2 or 3 and select their “specialty” from the above four teams. As a specialist, it will be your job to both distill the information developed by the class (via homework and class activities) and create the final product for the general public: an annotated list of websites that are recommended for the topics in relation to local, regional, national and international resources. We will discuss definitions and expectations further during class time. By choosing your “specialty”, your team will also take the lead in teaching a class on the final day of our course to a select audience (A 4th Grade Class in Leiderdorp). Your team will be responsible for teaching students about your chosen topic and showing them the resources available for more information (see more on this part of the Final Project below: Climate Change Outreach Project). Remember, both your presentation and your online work will be used by local environmental organizations, the general public, and schools to help bring issues of climate change, impacts, and information into the community and classroom. So, I expect that your work on this project will be well researched and thought out!

Final Project must be completed and emailed by: Midnight on Thursday, July 9th, 2009.

2. Climate Change Outreach Project (2 parts)

Part 1: Teaching the ABC’s of Climate Change

As mentioned above, students will work in teams of 2 to 3 to a group. Each group will specialize in one of the following:

- 1. Climate Science**
- 2. Climate Impacts**
- 3. Climate Policy**
- 4. Climate Solutions**

Students will then be responsible for developing a 10-minute presentation summarizing their topic for a class of 4th grade students. Following the presentations, there will be a Q&A session of 5-10 minutes for the students to collectively answer audience questions. Students will be expected to cater their presentation to the level and needs of their audience and will complete their class with a hands-on solutions brainstorming activity (see Part 2: Brainstorming Solutions in Our Community). Presentations will be done on the last day of class (Thursday, July 9th, 2009) and all students will be expected to participate fully.

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Part 2: Brainstorming Solutions in Our Community

After presenting your topics and conducting outreach on climate change to your class, you will be leading a range of activities on climate change and solutions. The class format is estimated as follows:

10-11 Climate Change Presentations (Science, Impacts, Policy, Solutions)

11-12:15 "Brainstorming Greening the School": Energy, Water, Cleaning Products, Waste, Greening, Outreach and Education

12:15-13 Lunch

13-14 Sustainability Plan Development (Each Topic Above will be a "Team")

14-14:45 Student Presentation to Class, Principal and/or Other Classes on Projects

Each group will work with students the second half of the day to help brainstorm "Greening the School"—ways that students can propose taking action in their school to help combat climate change. You will work with students to individually list ways that they can change things in their school relating to Energy, Waste, Water use, "Green" Cleaning Products, Creating Greenspace, Outreach and Education. You will receive separate worksheets to complete with your students. You will also be practicing this activity with faculty at Webster (as well as your presentations!) on Wednesday, July 8th. So, you will want to have some ideas and information about solutions within your specific topics (TBA). After completing the worksheets with the students, you will help them to develop materials (posters, letter writing, etc) to actually enact some of their recommendations. Lastly, you will work with your team of students to make a short presentation about their ideas, obstacles to getting it done, and to show off the materials they have made!

Class 1: Understanding Climate Science

Questions: 30 minutes

- What 3 things do you know (or think you know!) about climate change?
- What are your top 3 questions you have about climate change?
- What are the top 3 most important things in your life: i.e. family, health, education, etc
- What are the top 3 things you are most passionate about? i.e. music, politics, climate change....etc)
- Do you see any relation between what is most important to you and climate change?
- What links can you make between climate change and what you're most passionate about?

Lecture

- **Overview of Course:** 30 minutes
- **Watch:** Blue Man Group Clip
- **Watch:** Simpsons Clip
- **Science Lecture:** 1 Hour

Activity: 1.5 hours Climate Science and Resources for Outreach Project

Overview of Google Mail and Google Notebook

1. Everyone get gmail account www.gmail.com
2. Send email to me with your gmail address
3. Begin learning the Google Blogger, Notebook and Documents
4. Overview/questions about using google

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Beginning Climate Notebooks and the Climate Change and You! Guide

1. I will share the Notebooks with you:
 - a. *Climate Science Resources*,
 - b. *Climate Impacts Resources*,
 - c. *Climate Policy Resources*,
 - d. *Climate Solutions Resources*

For each Notebook above, we will have a team (2-3 people) that will edit and select through the entries we have to compile them on the NYC Climate Coalition Website (www.nycclimate.org).

Think about which topic you want to focus more attention on for the Climate Change and You! Guide.

2. Students do searches on sites for ***climate science information & resources*** (website search)
3. Add selected **Climate Science Websites** into our google Notebook (separate international, nationwide and/or local)
4. **For each entry, create an annotated website bibliography in the Climate Science Resources Notebook:** With each website, be sure to include a good one-paragraph summary *in your own words* as to what you can find on the site!

Example:

Climate Change from the BBC Weather Centre

<http://www.bbc.co.uk/climate/evidence/>

A comprehensive website that focuses on international evidence, impacts, adaptation, Policies and links to other resources pertaining to climate change. The site gives a basic overview of the topics for the general public. Provides more detailed information for the UK.

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Class 2: The Social Side of Climate Change: Climate Impacts--- Human Rights, Migration, Gender and Poverty

Watch: ABP Elephant Clip

Impacts Lecture: 1 hour

Activity: 45 minutes Students Share Case Studies

Activity: 2 hours Climate Science Continued and Impacts and Resources for Outreach Project

Climate Impacts Resources Notebook and the Climate Change and You! Guide

1. Students do searches on sites for *climate impacts information & resources* (website search)
2. Add selected **Climate Impacts Websites** into our google Notebook (separate international, nationwide and/or local)
3. **For each entry, create an annotated website bibliography in the Climate Impacts Resources Notebook:** With each website, be sure to include a good one-paragraph summary *in your own words* as to what you can find on the site!

Class 3: Climate Policy & Climate Change Financing Mechanisms

Questions: Climate Change and Economics: 30 minutes

Make a priority list with: climate change; communicable diseases; sanitation and water; malnutrition and hunger; conflicts; education; population; and migration. which is most important and which is less important?

- How are these topics related? Chose your top priority and write a paragraph as to how it relates (or might relate) to each of the other topics.
- Who do you think should decide which "big global issues" are prioritized (i.e. politicians, economists, scientists, etc)
- What is the value of a human life?
- What is the value of clean water/air?

Lecture: 40 minutes

Activity: 30 minutes Students share their policies

Guest Speaker: 12:30-1:30 Economics of Climate Change, Kelly de Bruin, PhD candidate, Wageningen University

Activity: 1 hour Climate Policy Resources

Climate Policy Resources Notebook and the Climate Change and You! Guide

1. Students do searches on sites for *climate policy information & resources* (website search)
2. Add selected **Climate Policy Websites** into our google Notebook (separate international, nationwide and/or local)
3. **For each entry, create an annotated website bibliography in the Climate Policy Resources Notebook:** With each website, be sure to include a good one-paragraph summary *in your own words* as to what you can find on the site!

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Class 4: Climate Change and Economics-The Business Perspective

Climate and Business Lecture: 1.5 hours

Present Homework: 1 hour

Watch: The Story of Stuff 10 Minutes

Discussion: 15 minutes

Activity: 1 hour work on final project, presentation

Day 5: Climate Solutions? Mitigation and Adaptation Strategies Throughout the World

Lecture: 1 hour

Guest Speaker: 11-12pm, Sible Schone, WWF/KlimaatBureau

Activity: 1 hour Local Climate Solutions and resources (i.e. organizations, incentives for schools, households and businesses, free local resources) for Outreach Project

Activity: 40 minutes **Stabilization Wedges Game (Activity)**

http://www.princeton.edu/wedges/Stabilization_Wedges_Game_w8_Oct07.pdf

Climate Solutions Resources Notebook and the Climate Change and You! Guide

1. Students do searches on sites for **climate solutions information & resources** (website search)
2. Add selected **Climate Solutions Websites** into our google Notebook (separate individual, government, school and business)
3. **For each entry, create an annotated website bibliography in the Climate Solutions Resources Notebook:** With each website, be sure to include a good one-paragraph summary *in your own words* as to what you can find on the site!

Class 6: Communicating Climate-Reporting on Climate Change

Lecture: 40 minutes

Discussion: 40 minutes: Share findings of articles and recommendations to journalists, contrast sources used, etc

Activity: 1 hour Student role-play slide presentations

Activity: 1 hour Survey of people on streets about climate change

Discussion: 20 minutes Survey results

Objective:

This activity will help familiarize students with the biases in the “popular press” concerning climate change, including: sourcing of data, “spins” on the story, differences and similarities in journalistic coverage, etc. Students will also present 2-minute presentations of climate-related issues (no preparation necessary!) to be critiqued under peer review.

Activity Description

During the class, time will be allotted to discuss the findings and the “diversity in journalistic coverage” of climate change. Students will be asked to share their findings and compare/contrast the type of coverage available, sources, etc. Furthermore, students will brainstorm recommendations they would have to scientists, journalists and others to influence with the reporting on climate change issues (40 minutes).

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Remaining time will be allocated to students making **2-minute presentations** on specific concepts within climate change. Students will be given a slide from Al Gore's "An Inconvenient Truth" presentation, describing a certain scientific component of climate change and will be expected to do "off-the-cuff" explanation, as if to the general public or describing to politicians, etc (i.e. assuming limited knowledge of audience). Fellow students will critique the presentations of their classmates and will pose 1 "tough questions" following the presentation. Time limit will be strict! This exercise will mimic responses to questions/arguments about climate change that students will come across in their work—from the general public, private, and/or government sectors! (60 minutes)

Class 7: Copenhagen 2009: Mock High Level U.N. Conference & Questions on Final Project

Lecture: 30 minutes Review of topics and Questions

Activity: 2 hours Mock UN Climate Policy Session

Activity: 1 hour "Catchy Climate Change"—funny ads, eye-catching videos, good gimics, creative campaigns

Activity 1: Mock UN Climate Policy Session

Preparation:

Selected Climate Policy Draft:

http://www.roadtocopenhagen.org/index.php?c=wiki_revisions&id=&wiki_id=10

Preparation for this session should include reviewing the document above (which is a draft open for input). You will have selected a specific country or group that you are doing your research and preparation (i.e. Haiti, United States, Indigenous Peoples, etc). You should analyze the document above for your specific group, thinking about what you would want to include, take out, what components with which you might have issues. The link below might help you with understanding some of the lingo through your policy research.

Policy Jargon Buster: <http://www.copenhagenclimatcouncil.com/get-informed/climate-negotiations-updates/jargon-buster.html>

Activity:

Today you will be a party to one of the question/answer and debate session of COP15, the United Nations Climate Change Conference in Copenhagen, Denmark. This session you will be attending today is concerning climate change joint statement summary. Attendees to the conference (which is actually coming up later this year) include delegates to the Conference of the Parties 15 (COP 15), which is the "supreme body" of the United Nations Framework Convention on Climate Change (UNFCCC <http://unfccc.int/>) and it is the highest decision-making authority in international climate change policy.¹

¹ Furthermore, the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP) is the "supreme body" of the Kyoto Protocol. *It is an association of those Parties to the Convention that have also ratified the Kyoto Protocol. The CMP meets every year during the same period as the COP.*

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Today's session will be focusing on government-mandated climate change policy. The goal of this session is to create an overview document of international climate agreements that represent a "consensus" of country needs and goals. As a delegate for a particular constituency, your goal is to get as many points of legislation in the final draft to the COP15. You will put yourselves in the position of one of many key "players" in the policy development session and will have a series of Q&A sessions, debate, and—most likely—arguments throughout the session. In this session, there is going to be policy *developed* concerning climate change policy, however, it is up to you all to decide what, how, and to what extent (or lack thereof). Also unlike many policy hearings/sessions, you must come out of today's activity with a beginning plan-of-action (however minimal or tremendous it might be!), which includes the following:

The Outcome

1. What are the top 10 recommendations that the policy will include?
2. What are the 3 mechanisms you propose for financing these recommendations
3. You must come up with a max of 3 sentences that summarize the stance of the COP15 on this issue.

The Players (Please Select One)

United States	China	India	Brazil	The Netherlands
South Africa	Iran	Australia	Indigenous Peoples	Youth
Women's Caucus	Russia	Haiti	Japan	OTHER?

Prep-work (1 hour)

Each team should then critically read the material and determine what you feel are the key issues of the potential impacts of climate change policy from your assigned "point of view"; The readings assigned should give you the material necessary to define real issues and their associated uncertainties. You should also feel free to search the web for other "sources" of information that you might want to include in your argument. Remember, you are playing a role and you should try to use as many methods as possible to achieve your set goal.

The Session

The session meeting is comprised of four different, time-restrained sections, as follows:

1. Constituency Presentation "Statements" (10 minutes)

Each Country Delegate will have 5 minutes to present their "slant" on the issues, as well as the proceedings about to take place.

2. Debate and Policy Formation (60 minutes)

All groups will participate in debating the presentations from the previous section. This is where you need to actually draft your "outcomes" as required above.

The Convention established two permanent subsidiary bodies: the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI). These bodies give advice to the COP and the CMP, and each has a specific mandate. The SBSTA and the SBI traditionally meet in parallel, at least twice a year.

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3. Facilitator Wrap-up (10 minutes)

- 5 minutes for Facilitator to summarize and make suggestions
- 5 minutes comments and suggestions on process

Activity 2: Catchy Climate Notebook

“Catchy Climate” Notebook and the Climate Change and You! Guide

1. Students do searches on sites for ***catchy climate outreach, YouTube videos, advertisements, etc*** (website search)
2. Add selected **Catchy Climate Links** into our google Notebook (separate individual, government, school and business)

For each entry, create an annotated website bibliography in the Catchy Climate Notebook:

With each link, be sure to include a good one-paragraph summary *in your own words* as to what you can find on the site!

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Day 8: Developing a Climate Outreach Project

Thought-provoking Questions: 30 minutes

- What 3 things do you know (or think you know!) about climate change?
- What 3 questions do you have about climate change?
- What are the top 3 most important things in your life: i.e. family, health, education, etc
- What are the top 3 things you are most passionate about? i.e. music, politics, climate change....etc
- Do you see any relation between what is most important to you and climate change?
- What links can you make between climate change and what you're most passionate about?

Activity: Work on final project(s)

Activity: Faculty presentation: 12:00-1:30

Day 9: Climate Activism and Presentations

Time: 10:00-14:45

Location: Elckerlyc International School, Klimopzoom 41, 2353 RE, Leiderdorp

Teacher: Mrs. Jackie Finch

Transportation: Bus 39 and 48

Activity: Climate Change Presentations

10-11	Climate Change Presentations
11-12:15	"Brainstorming Greening the School": Energy, Water, Cleaning Products, Waste, Greening, Outreach and Education
12:15-13	Lunch
13-14	Sustainability Plan Development (Each Topic Above will be a "Team")
14-14:45	Student Presentations to Principal and Other Classes on Projects