

Teaching Notes for Greenhouse Gas Emissions Reduction Role-Play Exercise

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Facilities and materials needed for first session: 1) a classroom with computers and access to the internet for student web-research, 2) sufficient copies of the exercise handout for all students.

Prior to first session: I review the latest scientific and policy-making information on climate change. The most recent solid accredited source I have seen is the Copenhagen Diagnosis which is the work of several top climate scientists. The 2007 IPCC Report is also an excellent source, with the ~20 page summary for policy-makers being a nice document for student use.

I also determine which students I will assign to specific roles. A tip: A major goal of this exercise is for students to learn the complexity of the issue and to eliminate black-and-white thinking about it. If you have a student who clearly falls into one of the exercise roles in reality, it is good to challenge that student by placing them into a role with viewpoints very different from their own.

Instructor notes for first session: I prefer to run this exercise over two lab sessions (at my institution introductory geology labs are two hours long). During the first session I distribute the handout which includes all of the important information and ask them to read through the material. I then reinforce the idea that the students will be playing specific roles in the upcoming emissions meeting that will take place in the following week, and that it is important that they read the description of their role and play it to the best of their ability.

My normal lab section has ~16 students so I assign pairs of students (sometimes a trio if there is an odd number) to each of the 8 roles. They then are given time to: a) complete the assigned reading which I post on the course Blackboard site, b) meet with their partner(s) to consider how they intend to vote on the bill and why. The majority of this first session is to allow students to begin developing their position and to find data that support their position. The instructor can act as a resource, steering students towards good, accredited sources of data if necessary.

Before they leave for the day, students are reminded that they are responsible for drafting a clear position statement and preparing a 5 minute presentation, both of which must include a few examples of accredited data that support their position on the bill. Students are also asked to practice their presentation prior to our next meeting and to dress and act professionally for the exercise.

Facilities and materials needed for second session: 1) a classroom with a computer and LCD projector for Powerpoint presentations, a chalkboard/whiteboard 2) sufficient table space for students. It is especially nice if tables can be arranged in a semi-circle, but this is not necessary. 3) Sufficient copies of the agenda and a ballot for each of the eight delegations. 4) Placards for each delegation.

Prior to the second session: I prepare a brief opening statement (3-5 minutes) for the exercise, reminding the student delegates of the importance of the bill they are considering and

sometimes even throwing in a piece of recent, relevant scientific data. I also prepare a PowerPoint with the exercise agenda and with logos for the U.S. Panel on Climate Change and for each of the delegations. I make sure to dress up a little— a blue blazer or a tie to help set the tone for the exercise.

Instructor notes for second session: As students arrive I make sure that they have prepared their “ticket” to the event (statement). I direct students to their delegation seating area and they begin the exercise with the opening statement and remind them of the agenda. Time can get tight in this exercise so make sure to keep close track of it.

After a 10 minute final preparation period student delegations make their presentations. As the instructor it is important to keep them on the schedule (5 minutes) and to keep track of their current stance on the bill. I usually write each delegation’s stance on the board so all other delegations can be reminded throughout the exercise. I also have a note pad and take stock of who is speaking up and the quality of what is being said for later assessment. After each presentation there are 2-3 minutes for questions. Students have been instructed that speaking up will influence their grade, but you may have to throw out a few questions to get things going. I have found that it can be challenging to handle the Q&A time, because many students have good questions or challenges for the other delegations. Do your best to stay on schedule. This first part of the exercise will take at least one hour, but it shouldn’t go over 75 minutes unless you have a longer lab session.

Students then have a little time to reconvene now that all statements have been made. I openly encourage students to take stock of the current stance of each delegation and to figure out who they might need to influence to get the outcome they desire. Students are again reminded that five of the eight delegations must vote for acceptance or amendment, otherwise the bill will be rejected. I find that students usually like the active “lobbying” that is required, but as an instructor I encourage those who might be passively watching to get involved.

I give each delegation a final chance to make a statement to the larger group, and then I hand out ballots. Each delegation gets only one vote, so they must decide how they will use it internally. I ask the students to consider which delegations they found most accurate and convincing, but also to consider their roles as well before voting. After the vote count (I have had all three different possible outcomes occur in several years of running this exercise), I ask the students for feedback: What did they find realistic about the exercise? What was unrealistic? If time permits I might ask them other specific questions or recap what I saw as some of the key events in the exercise.

Assessment: Before students leave for the day, I make sure to get a copy of their presentations and their statements to assess their work. I use the rubric that is included in the exercise handout in my grading.