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Students and Their Contributions Towards a Greener Campus

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<p>Theme: Social Issues, Environment Unit Title: Students and their contributions towards a greener campus Author: Windy Roberts</p>	<p>Language/Level: Spanish/Intermediate II (Second semester of second year) School: University of Minnesota, Morris Length: 4 lessons</p>
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Scenario/Unit Overview: For the last several years, UMM has been positioning itself as a national leader in use of renewable energy. The students will discuss their awareness about the efforts of their university campus to be energy self-sufficient by the year 2010. They will reflect about their responsibility to implement changes that will create a more sustainable campus, community and world around them. The students will be able to convey to others in the campus and in the community the need to increase involvement in the process. They will also compare green efforts of their university with similar efforts in the Hispanic world, in particular Spain.

Note: This unit can be adapted to any campus, neighborhood, city, or to a personal level.

Important Question: How can my actions help my campus to be energy self-sufficient by the year 2010?

Goals/Outcomes:

- *Students will increase their understanding about sustainable communities and the impact on their lives.
- *Students will gain insight into how they as individuals can help others to understand the importance of creating sustainable communities.
- *Students will demonstrate the ability to read and write material in Spanish related to these themes.
- *Students will practice engaging in conversation, exchanging opinions, informing, and commenting about alternative energy usage.
- *Students will compare the progress of a Hispanic country, Spain, with the progress of the United States towards a greener world.

Performance Assessment

<u>Interpretive Task</u>	<u>Presentational Task</u>	<u>Interpersonal Task</u>
<p>The students will visit this Spanish website: http://erenovable.com/energias</p> <p>They will be given one area of renewable resource. They will compare and contrast these technologies with the ones being used on campus. A graphic organizer will be provided to the students to write their findings.</p> <p>A local expert, Prof. Arne Kildegaard, will give a talk in Spanish about the campus efforts to become carbon-footprint-free by the year 2010, in particular through the use of wind energy. Note: Can use a documentary/video clips from http://www.youtube.com/watch?v=sY1Uk_cgjr0 to adapt the interpretive task accordingly.</p>	<p>The students will design in Spanish a poster, a brochure, or a video to promote, raise awareness, and help others on the campus to implement the solutions available to reduce the carbon footprint at the university and the community. A rubric will be given for each of the steps in the process.</p>	<p>The students will place themselves in a “Green continuum.” They will talk about their own contributions to a greener campus and their plans to move closer to the green end of the continuum in the future, if that’s the way they feel about it. The students will work with partners and start their conversation by pointing to the “Green Continuum” provided.</p> <p>The idea is that the students, based on the information gathered during this unit, are well-equipped to have a interesting conversation and can defend their position whatever this might be.</p>

Cultures: Practices: Recognize what practices other countries are using and developing in terms of renewable energy.

Products: Compare the technology available in the rural areas of Spain to those in the United States.

Perspectives: Identify energy renewable practices that are evolving out the need to reduce the use of fossil fuel.

Connections: The new major: Environmental Studies available to students this year and its implications in creating more awareness on campus and connection to other fields of studies.

Comparisons: Compare the efforts of other countries to use more renewable energy.

Communities: Beyond the classroom: Spread the news of the effort of the campus and its students to reduce their carbon footprint in the community and the world.

Communication: Engage in conversation with each other to discuss information on renewable energy. Provide information and express feeling about where are they in the continuum. Express opinions, ideas and present information about sustainable communities to listeners and readers.

Language Functions	Grammatical Structures	Essential Vocabulary	Resources/Materials	Learning Activities 3
<p>Converse about an important current issue such as renewable energy</p> <p>Defend and give opinions</p> <p>Interpret authentic material associated with the issues</p>	<p>Comparisons: Más que, menos que</p> <p>Verbos: Reciclar, Ahorrar, Consumir, etc. Future tense</p> <p>Uses of Por and Para</p>	<p>La turbina de viento</p> <p>Reciclar</p> <p>Biomasa</p> <p>MedioAmbiente</p> <p>Energía renovable</p> <p>El mundo. La Tierra</p> <p>Residuos</p> <p>La fuente energética</p> <p>Petróleo</p> <p>Combustible fósiles</p> <p>Huella de carbono</p> <p>Planta de etanol</p> <p>Leña</p>	<p>Documentary “The 11th Hour.” Produced and narrated by Leonardo DiCaprio (English with Spanish subtitled)</p> <p>Photographs of different areas of the world that have been damaged by the misuse of resources.</p> <p>Article about the efforts of Spain in becoming a leading country on use of wind energy. http://www.portaldelmedioambiente.com/ Ambiente-España: Liderazgo en energía eólica. 4 de agosto del 2008.</p> <p>Carbon footprint survey to determine our contribution to become “greener” http://www.mycarbonfootprint.eu/ Include this below to get to Spanish: index.cfm?language=es</p>	<p>Beginning: Show parts of a documentary. Make a list of new vocabulary generated from the Spanish subtitles in the documentary. Find information on websites. Listen to presentation about wind energy.</p> <p>Middle: Speaker/Expert on wind turbine energy and field trip to the “inside” of the wind turbine. Expert will recount the effort of the college to become carbon-footprint-free.</p> <p>End: Showcase of videos, brochures, and posters to spread the good news on campus and into the community.</p>

Presentational task and assessment: Unit projects (red)

(Note: pages with red titles are intended for teachers. The other pages are handouts for students.)

Students will work in groups of two to four. Each group can choose to complete the presentational task by a brochure, a poster, or a video. The final product will answer the question: How could the impact of my actions help my campus to be energy self-sufficient by the year 2010?

Process

Interpretative:

A. The students will read information available in the web pages to acquire knowledge and vocabulary to discuss renewable energies and alternative sources of energy. They will also become aware of the efforts of the University to become carbon-footprint-free by the year 2010. Although there is a University website with all the information available in English, a professor, Arne Kildegaard, who is fluent in Spanish and an expert on wind energy, will come as a guest speaker to give that same information available in the UMM website about the efforts to become carbon-footprint-free. **Note:** the interpretive activity and task can be adapted to use a documentary or video clip from http://www.youtube.com/watch?v=sY1Uk_cgjr0 for those campuses not engaged in a project to reduce their carbon footprints.

Interpersonal:

B. The students will discuss among themselves their findings from the readings and Dr. Kildegaard's presentation (or from the documentary or video clips). They will work on a Venn diagram contrasting and comparing the information on the web pages and the lecture from Dr. Kildegaard (or information from the videos and what they know of the current practices on their campus or in their school or community/city/state).

Interpersonal and presentational:

C. The students will work in groups to create their brochures, posters, or videos. Each group will get feedback from another group at a middle stage of the process.

Presentational:

D. Groups will present their projects to the class.

Possible modifications. This unit is designed for college-level students. The students are expected to do the entire project outside of class except for the presentations. At the high school level, it would be better to budget two class periods in a computer lab.

Unit projects
Interpretive Task

The basics:

Use the form below to:

- Listen/watch/read the assigned web site, video, etc.
- Take notes for your discussion.
- Write questions you still have and any comments about what you read/saw/heard.

I will review your notes and add comments.

<u>Name:</u>	
<u>Title of Video/article</u>	
<u>About the Author/Speaker</u>	
<u>Main points</u>	
<u>Details</u>	
<u>Intended Audience</u>	
<u>Message</u>	
<u>Comments</u>	

Presentational Task

The basics:

- Design and create a brochure, poster, or video in groups of no more than four.
- Groups will be formed toward the beginning of the study of the unit.
- You should start as soon as possible, even though you will present your project at the end of the unit.
- You should aim for your highest quality work. Remember your project will go public!

The topic:

You need to present some of the efforts of the campus/city/ community to reach its goal of being carbon-footprint-free [by 2010]. Your team needs to personalize it, answering the question “How could the impact of our actions help our campus (us) to be energy self-sufficient by the year 2010?”

Requirements:

- Make a three panel brochure, 2 feet by 3 feet poster, or three-minute video.
- Be creative and show critical thinking while writing the information.
- State clearly:
 - The goals of the university (community/city) to become carbon-footprint-free by 2010.
 - How do the goals affect you?
 - How can individuals help to achieve the university goals and individual goals?
 - What solutions is the university proposing to reach its goal? Choose one or two to develop. (Examples: use of hybrid cars, wind turbines, biomass, bicycle paths, etc.)

Use this checklist to be sure you are on track:

Presentational Task Checklist		
Group:	Yes	No
Three panels (if brochure); 2 feet by 3 feet (if poster); 3 minutes (if video)		
Content appropriate		
Description of the campus initiatives		
Description of student involvement		
Grammar, vocabulary, and spelling		
Graphics and/or pictures		
Comments:		

Assessment of the Presentational Task

Non-negotiable items:

- Your work must be neat and ready for public viewing
- For brochure: you must use of Microsoft Publisher or similar software for final copy
- For poster: you must have word-processed text and original photos and/or drawings

- For video: you must have computer-added enhancements like overlaid text or special effects
- You must have at least one other group look over and give comments on the draft
- Your product must be completely in Spanish
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Rubric for presentational task

Criteria	5	3	1	Comments
Actively interest the reader	Very attractive, ready to be used by UMM!	Attractive, neat. Needs some modification.	Not very attractive. Needs substantial work.	
Organization	Highly organized, message comes across easily	Organized, message readable	Fairly organized, hard to read message	
Vocabulary	Correct and extensive use of relevant vocabulary	Some use of relevant vocabulary; important words missing	Minimal use of relevant vocabulary; words used incorrectly	
Content	All the information included demonstrates a high level of understanding of the use of renewable energy	The information included demonstrates an understanding of the use of renewable energy	Information presented demonstrates little understanding of the use of renewable energy	
Creativity	Highly creative, well illustrated,	Some creativity,	Little evidence of creativity	
Correct use of Spanish in project	Correct spelling, grammar, punctuation, and pronunciation	Occasional grammar, spelling, punctuation, and/or pronunciation errors	Frequent grammar, spelling, punctuation, and/or pronunciation errors	
Quality of delivery to class	Enthusiastic at all times, natural pauses. Connects with the audience	Some enthusiasm shown, many unnatural pauses.	Lack of enthusiasm, frequent unnatural pauses	
Equitable participation of all members	All participants had a clear role and participated accordingly	Participation not well distributed. Few evidences of group cohesiveness	Highly unbalanced. Monopolized by one member of the group.	
Total points				

Interpersonal task and performance feedback activity: Wrap-up discussion (red)

This task is the capstone for this unit. The students are expected to perform at a high level in Spanish. The students have been exposed to an array of opportunities to develop language skills that will allow them to express their own opinions and views about renewable energy and related topics. They will start the conversation by pointing to the spot in the “Green continuum” where they feel they are.

The students will assess themselves during their conversation with a rubric given to indicate the level of quality of the conversation. After fifteen minutes they will change partners. This way they’ll have the chance to recycle some of the information given by them and use the information received orally by the different partners they talk with.

The instructor will be circulating around the pairs to assure that the students are fully engaged. The instructor will participate briefly in conversations to help the pairs to move forward in the conversation.

Possible questions to keep discussions going (all in Spanish)

Who is the “greenest” person that you know, and why is this person so green?

Is it important that everyone contributes to a greener world?

Do you think the wind turbine is attractive?

Have you been to the biomass furnace?

Have you seen “An Inconvenient Truth”? What do you think of it?

How often do you think about the future?

What was your project about?

Which brochure most appealed to you and why?

Which poster most appealed to you and why?

Which video which most appealed to you and why?

What did you learned about Spain’s efforts to become a leading country in the use of renewable energy?

Wrap-up discussion

This class period will be devoted to discussing renewable energy and the role of students at UMM (or in your schools/communities/cities). You want to demonstrate to yourselves, your peers, and to me that you have what it takes to carry on an extended conversation in Spanish about this topic.

You will work with a partner, changing your partner, and filling out a brief evaluation form every 15 minutes. I will be circulating, listening to your conversations, and sometimes asking my own questions.

To begin each conversation, answer the question: Where are you on this green continuum?

Very green _____ **Intermediate** _____ **Not green**

Why do you think you are there?

What would it take for you to move along this continuum?

Here is the evaluation form to fill out quickly and honestly after each 15-minute conversation. Other copies of this form will be available in class. I will be reading these evaluations. However your participation grade for today will reflect my judgment, rather than just being an average of your evaluation scores.

Your name:	Yes	In between	No
Partner's name:			
A. Were you both able to explain your position on the continuum?			
B. Was the conversation fluent?			
C. Did you and your partner listen to each other respectfully?			
D. Did you ask questions of each other?			
E. Did you both use Spanish at all times without relying on English words to keep the conversation going?			
What would you like more practice on?			
Comments:			