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Lesson Plan - Performing Personal Energy Audits and Creating a School Wide Action Plan

Center for Urban Resilience

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Lesson 9: Alternative Energy Action Plan

Overview:

In this lesson, students will use their knowledge about major and alternative sources of energy to create a public service announcement (PSA) that makes a convincing argument for increasing their community's use of alternative energy sources. In constructing the argument, students must refer to specific scientifically-based evidence and facts that support their claims about alternative sources. The main point of this lesson is to highlight how the understanding science and envisioning possibilities steps of the action plan process can be utilized to take action. After completing their PSA, students will present their work to the class.

Sub-Question:

How can I reduce my community's negative impact on climate change?

Ways of Knowing Urban Ecology:



Students will...

Understand

- Understand that various energy reduction strategies can be applied to a system in order to make it more efficient. (*ecosystem change, forces and drivers, ecosystem state and structure*)

Talk

- Present an argument to an audience that supports the use of alternative energy sources.

Do

- Research evidence and facts to support the use of alternative energy sources.
- Create a public service announcement.

Act

- Construct an action plan for the school that addresses lowering their community's effect on climate change

Safety Guidelines:

None

Preparation:

Time:

2-4 class periods

Materials:

Activity 9.1

Computers with internet access and a program suitable for making videos (Windows Live Movie Maker can be downloaded free from the internet. You may however need to talk to your school's IT department in order for them to do this for you.)

Student directions

Action Plan/Capstone Project Rubric (Understand Science, Investigate and Envision Possibilities)

LCD projector for presentation of videos

Instructional Sequence:

Activity 9.1

1. You may have students work in groups of two or individually. Review the expectations for the assignment. You may also want to show them a sample PSA from YouTube and discuss the different elements of the PSA that were well done and those that could have been improved upon.
2. On the first day, have students focus on collecting images and science evidence/facts they can use for their argument. Students should refer to concepts that were discussed throughout the module and also use the internet as a source of images and ideas.
3. Students will need to use some type of program to produce their video. Windows Live Movie Maker is relatively easy to use, however if access to this type of program is not possible at your school, you can choose to use PowerPoint. Before having students begin their work, review the basic features of the program you have chosen for them.
4. On the next day, students should focus on constructing the video. The video is only meant to be 1-2 minutes long.
5. Students then present their videos to the class. After each video, the class should discuss both the strengths and weaknesses of the PSA.