



# Guide for Classroom Presentations

## SPEAKERS

Speakers can address a variety of environmental, health, economic, and social issues related to transportation. Topics presented will primarily help students cover educational standards on “Air Quality and Global Climate Change”, “Human Alteration of the Environment” and “Citizenship- Individuals Participate In The Political Process.” Speakers also offer students insights into professional opportunities. The following is a short list of suggested speakers to request presenting at your school.

<b>Speaker Sources</b>	<b>Contact</b>	<b>Topic</b>
EPA K-12 education programs	Regional EPA office	Global warming and ozone
Rails to Trails	<a href="http://www.railtrails.org">www.railtrails.org</a>	Bike path values and history
American Lung Association	<a href="http://www.lungusa.org">www.lungusa.org</a>	Air quality and health
Regional and Town Planners	Local	Bike route planning/ mapping
State Congressmen	Local	Political process
Local Mass Transit Authority	Local	Mass transit demonstration

### **Tips For A Successful Event**

Guest speakers can run the gamut of ability. You will help ensure a successful event by providing them with an outline of talking points to be covered, student background information, and ideas for interaction. It is also a good idea to ask them what they will be doing.

#### **i. Outline of Talking Points**

Ask speaker(s) to come prepared to discuss:

- o how their efforts relate to transportation and the environment,
- o how students can relate to what they do, and
- o what students can do to address their goals.

#### **ii. Student Background Information**

Provide speaker(s) with information on any student work that relates to this topic and any special needs your class may have.

#### **iii. Ideas for Interaction**

Provide the speaker(s) with ideas for questions they may want to ask the kids. Such as they may want to ask the students how they get around, or what their opinions are on pollution. Ask the speaker(s) if they have an activity the kids may do.

#### **iv. Preparing Students**

Preparing students with questions is equally useful and will make the speaker’s job easier.

Some possible student questions for the speaker(s) are:

- o What is an average day like?
- o What skills does the speaker use in his/her specialty?
- o What does the speaker care about and why?
- o What impact does the speaker have and what are her/his goals?

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## TECHNOLOGY DEMONSTRATIONS

Technology demonstrations are exciting, educational, and relatively easy to set up. Technology demonstrations primarily address “Design a Product” and “Universal Systems” standards. They can be used to create interest before embarking on a project or used as a wrap up assessment of the universal technology process.

The following is a list of suggested resources for speakers, topics, and demonstrations:

<b>Organization</b>	<b>Demonstration/ Product</b>
NESEA	Curricular units on transportation
Electric Vehicle Associations	Electric cars and bicycles
Hybrid car manufacturers	Hybrid car
College Engineering/Env. Dept.	Biofuel, electric, and high efficiency vehicles
Local bike shops	Recumbent, electric, and folding bikes
Bike and Museum	Early bikes with evolving technology
Car Museum	Turn of the century electrics and high efficiency autos
Local inventor/farmer	Small vegetable oil refinery to make biofuel for diesel engines

### **Tips for A Successful Event**

Transportation technology demonstrations are very popular. For the most part, kids like vehicles. Here are a few tips to ensure strong curriculum connections and maximize engagement.

#### **i Get Students Talking**

To ensure a meaningful experience for students, prepare them with questions about technology issues:

- o What are the goals the product was intended to meet?
- o What problems did inventors come across?
- o What went into the product (costs) and what are its benefits?
- o What would students or inventors change?
- o Compare products.
- o How do these vehicles fit into the existing transportation system? Would new infrastructure or laws be needed to use this product?

#### **ii. Make it fun and interactive**

To make it as fun and interactive as possible, include vehicles which students can ride or drive. Set up ride space and traffic patterns ahead of time so that students can ride safely and ride time is shared. Be prepared to model participation and ride a bike in front of students. Be conscientious of gender dynamics and nervous drivers. Make sure everyone has ample opportunity to participate and feel safe.

Alternatively, you may want to take students on a field trip to see cutting edge transportation technologies or participate in alternative energy car design and construction. Consider researching:

- American Tour de Sol
- Electrathon