

Educating Youth on Air Pollution Caused by Transportation

Jennifer Murphy – University of Idaho
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Introduction

Air pollution caused by transportation sources have been a major concern for many years. Efforts to create cleaner sources of fuel, such as biodiesel, have curbed these concerns. However, educating youth on such issues has not been a priority in the solution. This lesson was created for first grade students in order to educate them about air pollution, introduce them to cleaner sources of fuel such as biodiesel, and help them make informed decisions on ways in which they can reduce air pollution.



Pre and post test demonstrating student's knowledge of air pollution

Methods

1. Students took a pre-test in which they drew a picture of their prior knowledge of air pollution.
2. "The Magic School Bus Gets Cleaned Up" introduced air pollution, diesel, biodiesel, and taught students about air pollution created when idling a vehicle. Students then looked at drawings of diesel and biodiesel sources and discussed ways in which they get energy to ride a bike or walk.

3. Students were assigned roles for the driving activity. Three students were chosen to represent vehicles: a diesel truck, biodiesel truck, and a walker/biker. Each driver started with eight "Air Pollution" cards and four students represented mile markers who collected pollution cards from the drivers. At each marker, the diesel truck gave away two pollution cards, the biodiesel truck gave one card, and the walker/biker did not give out any cards.
4. At the end of the course, drivers and mile markers taped the "Air Pollution" cards on the board. Students visually compared the amount of air pollution created from each vehicle and discussed which source created the least amount of air pollution. Students brainstormed ways in which they could reduce air pollution and inform their families of the strategies.
5. Students took a post-test which showed their comprehension of air pollution after the lesson.



Diesel driver handing a mile marker pollution cards

Conclusion/Discussion

This lesson was tested with first grade students at the McCall Outdoor Science School. From this lesson, students learned how transportation creates air pollutants and that alternative sources of fuel like biodiesel have less environmental impact than diesel. Students discussed ways in which they can cut down on air pollution by riding a bike, walking, or telling their families not to leave vehicles idling. The lesson relates to the NARA project through the introduction of the effects that transportation have on the environment and the benefits of biodiesel as an alternative fuel source.



Students compare effects of fuel sources

Acknowledgments

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McCall Outdoor Science School (MOSS) in McCall, Idaho

Special thanks to Andrew Trogstad-Isaacson, Leslie Dorsey, Ashlee Fliney, and Danica Hendrickson.

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