

Air Quality and Transportation

Source of Lesson:

<http://www.tnrcc.state.tx.us/air/monops/lessons/carlesson.html>

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Description of class: N/A

Length of Lesson: One period

Grade Level: 2nd

Honors or regular: N/A

The Lesson:

I. Overview

In this lesson, students observe car pooling patterns and the important role car pools play in reducing air pollution.

II. Resources, materials, and supplies needed

Paper

Pen/Pencil

Engagement

Ask the students how they get to school and graph the types of transportation used.

Background

Air pollution is a problem in many areas. Air pollution is air that is dirty compared to its original state. Air pollution can be harmful to people, animals, plants, and structures. Vehicles produce a large percentage of air pollution. Vehicle exhausts contains carbon monoxide and small traces of volatile organic compounds. These compounds, on hot, sunny days with light winds, can produce ground level ozone. Ozone is an air pollutant that can cause health problems after high levels of exposure. Ozone is a main component of smog. (More information and activities on ozone are available at <http://www.tnrcc.state.tx.us/air/monops/lessons/ozoneinfo.html>) Another common pollutant is airborne particulate matter. Some examples are tiny particles of soil, ash, or emissions from some factories that can get into your lungs and cause health problems.

In order to control air pollution, the government has placed restrictions on how much of these contaminants can be released into the air. One thing you can do to keep the air clean is to encourage your family or friends to walk or ride a bike when possible instead of driving.

Procedures

Students will tally cars on a sheet that has been categorized as follows:

One person in car

Two persons in car

Three or more persons in car

Have students go to the front of the school in the morning or afternoon when there is the most traffic.

Have students tally the cars for five minutes.

Return to the classroom and have the students discuss their observations.

Graph the outcomes of the experiment.

Ask the students to discuss alternatives to driving alone.

Enrichment

Make a list of the different alternatives to driving and discuss how they can help lessen air pollution.