

Exercise 3E

From: Texas Natural Resource Conservation Commission
<http://www.tnrcc.state.tx.us/air/monops/lessons/>

AIR QUALITY AND TRANSPORTATION IN THE TULSA AREA

OBJECTIVE

To learn about air pollution and the effects it has on our Earth.

FOCUS

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

BACKGROUND

(See also Chapter II)

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. 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 govern-

Purpose

This experiment will help us to see that using carpools and other alternative means of transportation are necessary to lessen air pollution.

Grade Level

2nd grade

Essential Elements

Acquire data through the senses. The student shall be given opportunities to observe properties and patterns of objects, organisms, and events in the environment, and explore the environment.

Classify, order, and sequence data. The student shall be given opportunities to classify matter, forces, energy, organisms, actions, and events from the environment according to similarities and differences.

Communicate data and information in appropriate oral and written form. The student shall be given opportunities to describe changes that occur to objects and organisms in the environment.

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ment 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.

REFERENCES

- Integrated Thematic Unit Scholastic
- Tulsa Area Clean Cities Program <http://www.tulsacleancities.com/>
- Tulsa Commuter Choice Program <http://www.tulsacommuter.com/>
- Tulsa Ozone Alert! Program <http://www.ozonealert.com/>

ACKNOWLEDGMENT

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