

# RIDEWORKS

## Environmental Expressions 2001



### The Contest

Students in grades 3 through 8 are encouraged to express thoughts about traffic congestion as it relates to air pollution, and about alternatives to driving alone, either real or imaginary, as ways to reduce traffic and the amount of air pollution entering our atmosphere.

### Global Warming

When air pollution (smog) accumulates in the Earth's atmosphere, it heats up and causes the "greenhouse effect" which is responsible for the phenomenon commonly called global warming. Basically, our planet is becoming warmer little by little as a result of cumulative and larger amounts of smog in our environment.

1998 was the warmest year on record, and 7 of the 10 warmest years on record have occurred in the 1990s.\*

Heating our homes, using air conditioners, and business operation all contribute to air pollution levels. Transportation accounts for about one third of the pollution responsible for global warming. Most people drive to work alone day after day after day, but we can choose to share rides in a number of ways, or we can find ways to use our cars less often.

\* International Center For Technology Assessment

### Alternatives to Driving Alone

**Transportation:**      **Example:**

- carpool ..... instead of four people riding separately in four cars, they share a ride in one car
- vanpool ..... seven people share the ride to work each day and split the expenses
- bicycle ..... instead of driving to the gym to exercise, go for a bike ride instead
- walk ..... leave the car home; get exercise while conserving fuel
- train ..... instead of being stuck in rush hour traffic, use the train time to read or relax
- bus ..... share the ride with as many as 40 other people to save energy
- telecommute ..... instead of driving to the office, work from home one day or more each week
- monorail ..... now being built at some airports to reduce heavy car traffic

### A Serious Threat?

Our planet, over millions of years, has experienced periods of both warming and cooling. Scientists debate whether or not recent trends in global warming are caused by our modern society.

Cars today are built to run cleaner than ever before. Gasoline is cleaner too, but the fact is that there are more cars on our roads than ever before. And because of "suburban sprawl," we are using our cars more often.

### What Can We Do?

Change driving habits. Make grownups aware of how often they use the car alone. Talk with friends and family about air pollution and global warming and how personal choices really can make a difference.

If each adult shared a ride or cut back on just a couple of trips each month, it would significantly reduce the number of cars on the road and therefore it would cut back on the amount of pollution in our air. Sharing rides all the time may not be practical, but if you would share a ride just once a week—or a few times each month—and if we ALL made an effort to do this, it would greatly reduce the number of cars on the road and the amount of air pollution our cars are creating.



For entry rules call RIDEWORKS at 1-800-ALL-RIDE or visit [www.rideworks.com](http://www.rideworks.com)

**ENTRY DEADLINE: MONDAY, MARCH 5, 2001**

RIDEWORKS 389 Whitney Avenue, New Haven, CT 06511



## Activity Page for Students

### Test Your Knowledge

- TRUE OR FALSE** People produce carbon dioxide (CO<sub>2</sub>), a greenhouse gas, when they breathe.
- TRUE OR FALSE** Riding the bus is 47 times safer than traveling in a car.
- Which of these vehicle fuels causes the least pollution?**  
A. Electricity B. Natural Gas C. Alcohol D. Hydrogen
- What region of the United States has experienced the worst effects from acid rain?**  
A. Northwest B. Northeast C. Southwest D. Southeast
- Which of the following is the biggest polluter of our air?**  
A. City Buses B. Passenger Cars and Light Trucks C. Over-the-Road Trucks D. Power Plants

### The Costs of Driving (A Brain Teaser)

Obviously there's gas and the cost of buying (or leasing) the car. How many other costs can you think of associated with driving?

### How Much Money Do You Spend on Gas Alone? (A Math Quiz)

If you commute 20 miles each way to work and your car gets 25 miles per gallon, how much money do you spend every year on gas? (For this example, we'll use the price of gas at \$1.75 per gallon. Work days are Monday through Friday minus 7 holidays, 10 vacation days, and 8 sick days.)

### Put a Sock On It (A Pollution Demonstration)

To demonstrate the effect of car exhaust on air quality, try this experiment **WITH ADULT SUPERVISION**: Take a pair of white sweat socks and put one over the mouth of the car's tail pipe. Have the adult start the engine and let it run a few minutes. Take the sock off and compare it with the clean one. You should be able to see just a small portion of the auto pollution we breathe every day.



## Answers

9,400 miles per year ÷ 25 miles per gallon = 376 gallons x \$1.75 gallon = \$658  
52 weeks per year x 5 days a week = 260 days - 25 days off = 235 work days x 40 miles round trip =

### HOW MUCH MONEY:

year (a typical work commute) is \$6,795.

Transportation Association estimates that the cost of driving a medium size car (in 1998) 15,000 miles a testing, taxes that pay for construction to repair wear-and-tear damage of the roads. The American Public

**COSTS OF DRIVING:** Car insurance, tune-ups, oil changes, tires, driver's license, registration, emissions

Motor vehicles account for about 50% of our air pollution nationwide.\*\*

5. B. Passenger Cars and Light Trucks. There are more than 200 million of them on American roads.

4. B. Northeast\*

for 20 years or so.

3. D. All of these fuels are cleaner than today's gasolines, but hydrogen is the only one with the potential to be pollution-free, emitting only water vapor. However, hydrogen-powered cars won't be on the market

2. True, according to the National Safety Council.

pollution sources.

1. True. Humans and other animals release CO<sub>2</sub> when they breathe. Large quantities are absorbed by the Earth's plants and oceans.\* The problem comes when too much is produced from auto exhaust and other

Sources:

State Services Organization: [www.sso.org/otc/ozonemapdir/htm](http://www.sso.org/otc/ozonemapdir/htm)

\* American Petroleum Institute: [www.api.org/globalclimate](http://www.api.org/globalclimate)

\*\* Environmental Protection Agency: [www.epa.gov/ozone/science](http://www.epa.gov/ozone/science), [www.epa.gov/airnow](http://www.epa.gov/airnow)

