

Cleaning Up Europe

All questions require at least
THREE sentences on own paper.

PLACES & TERMS

European Environmental Agency

agency created to provide the European Union with reliable information about the environment

particulate a very small particle of liquid or solid matter

smog a brown haze that occurs when the gases released by burning fossil fuels react with sunlight creating harmful chemicals

ozone a form of oxygen that causes health problems

Saving Europe's Water

What is polluting Europe's water?

Mines and factories create much of Europe's water pollution. Industries often dump chemicals into streams and rivers. Factories sometimes bury solid waste. Poisons from this waste seep into the ground water and *contaminate* wells and rivers. And the burning of coal and other fuels causes acid rain. Acid rain not only hurts trees. It also changes the chemistry of lakes and rivers, often killing fish.

The link between industry and pollution creates a hard choice. Most countries want to develop industry. Some accept environmental damage as the price they must pay for progress. Other nations force industry to use pollution controls, but these are usually expensive.

Industry is not the only source of water pollution. Other sources include the following:

- **Sewage** Treatment plants remove harmful substances from *sewage* before it is released into bodies of water. But not all cities have such plants. In Poland, from 1988 to 1990, 44 percent

of the cities had no sewage treatment plants.

The water in most of Poland's rivers is unsafe to drink. It has also poisoned the soil so that some crops are unsafe.

- **Chemical Fertilizers** Rain washes *fertilizers* from fields into bodies of water, where they cause algae and plants to grow faster than fish can eat them. The plants and algae die and decay, using up oxygen. The lack of oxygen kills the fish.
- **Oil Spills** In 1999, a tanker sank off the coast of France and spilled 10,000 tons of oil. That oil spread along 250 miles of coastline. It killed thousands of shorebirds.

Pollution spreads easily, so many countries must work together to solve the problem. For example, the Rhine River grew much more polluted after the mid-1900s. To correct this, five nations formed the International Commission for the Protection of the Rhine. Since it began meeting in 1950, the commission has recommended many programs. One program was sewage treatment. Today, the Rhine is less polluted.

In addition, the European Union (EU) has passed environmental laws that its member nations must obey. The EU also set up the European Environmental Agency. The purpose of this agency is to provide the EU with reliable information about the environment.

1. How are chemical fertilizers creating problems?

Answer in at least THREE SENTENCES on own paper.

Improving Europe's Air Quality

What problems are caused by air pollution?

Air and water pollution are often studied separately. But they are linked. For example, water pollution can be caused by air pollution when rain washes chemicals out of the dirty air.

Air pollution is made up of gases and particulates. Particulates are very small particles of liquid or solid matter. Many human activities expel gases and particulates into the atmosphere.

- **Using Fossil Fuels** The burning of petroleum, gas, and coal causes much air pollution. It often leads to the formation of smog. Smog is a brown haze. It occurs when the gases released by burning fossil fuels react with sunlight to form harmful chemicals. One such chemical is ozone, a form of oxygen that causes health problems.
- **Fires** Forest fires and the burning of garbage release smoke and particulates into the atmosphere.
- **Chemical Use** Many activities release harmful chemicals into the air. These include dry cleaning, refrigeration, and the spraying of pesticides.

- **Industry** Factories discharge chemicals, such as sulfur and ammonia, into the air. The factories in former Communist countries have been heavy polluters. For example, air pollution is worse in the former East Germany than in the United States.

Breathing polluted air can cause *respiratory* diseases. These include asthma, bronchitis, and emphysema. Air pollution may cause lung cancer. It also harms livestock, stunts plant growth, and causes acid rain.

Individual countries are working to cleanup the air. France has passed laws that require new buildings to use better *insulation*. Insulation reduces the need to burn fossil fuels for heat. Other nations in Europe are also passing laws to protect the air.

Members of the EU agreed to begin reducing emissions from cars and vans. The EU will help lead the effort to restore Europe's environment.

2. What steps are being taken to clean the air?

Answer in at least THREE SENTENCES on own paper.