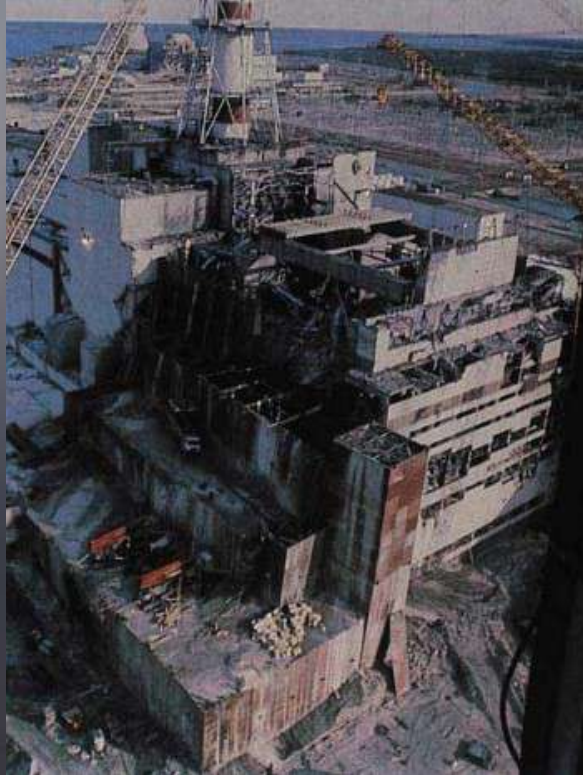


Before we learn about Latin American's environmental concerns, let's review the issues we addressed when studying Europe. Can **YOU** name all three?

Use the clues on the next slide to help you remember.





# Europe's Pollution Problems

- Acid Rain – Germany
- Air Pollution – United Kingdom (UK)
  - Nuclear Explosion – Chernobyl power plant in the Ukraine

# Latin America's Environmental Concerns



- SSG62 The students will discuss environmental issues in Latin America.
  - a. Explain the major environmental concerns of Latin America regarding the issues of **air pollution in Mexico City**, Mexico, the destruction of the **rain forest in Brazil**, and **oil-related pollution in Venezuela**.

# Air Pollution in Mexico City

- nearly 20 million people live here
- second most populated city in the world--Tokyo is first
- city's population and location contribute to its bad air pollution problem
- considered to be the most polluted city in the world



# Air Pollution Over Mexico City



# Air Pollution Over Mexico City





# Causes of Air Pollution

1. huge population = lots of cars = huge car emissions
2. high elevation--less oxygen so fuels don't fully burn

higher level of gases harm eyes, lungs, and the heart

1. Sierra Madre Mountains surround city and trap in polluted air

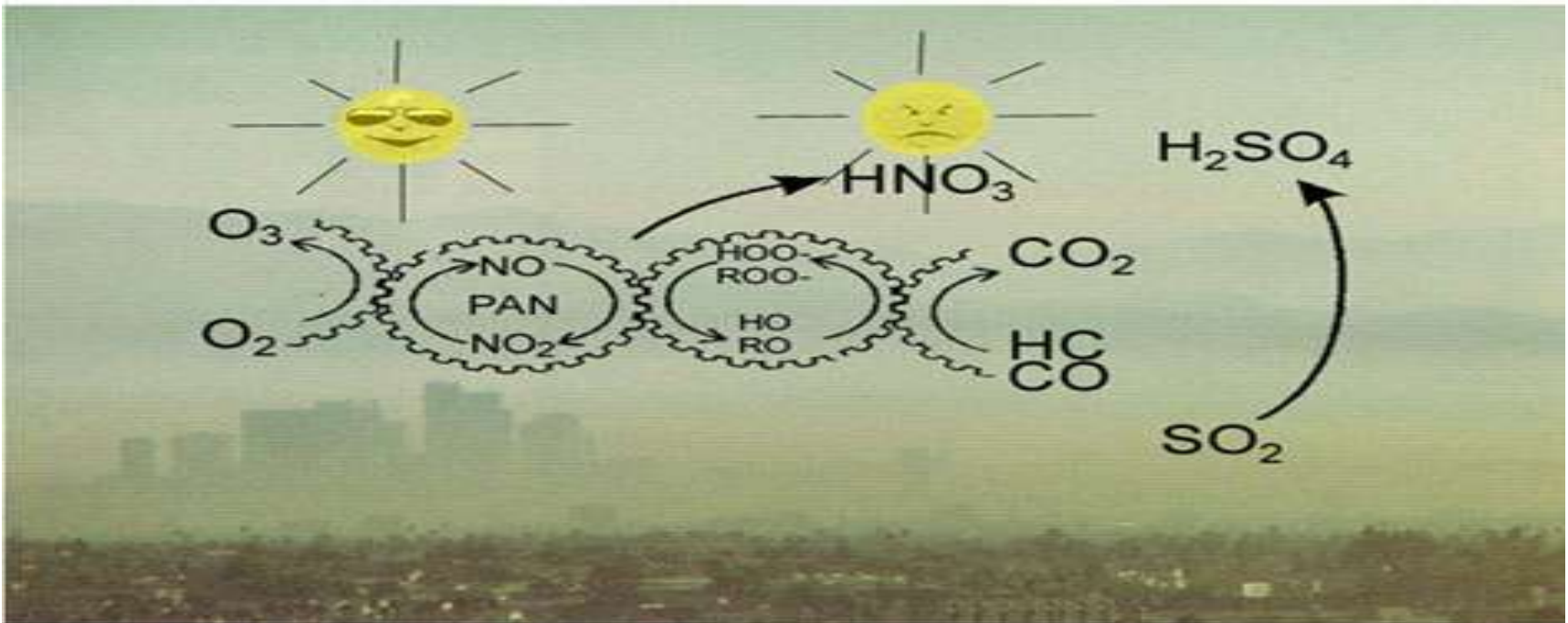
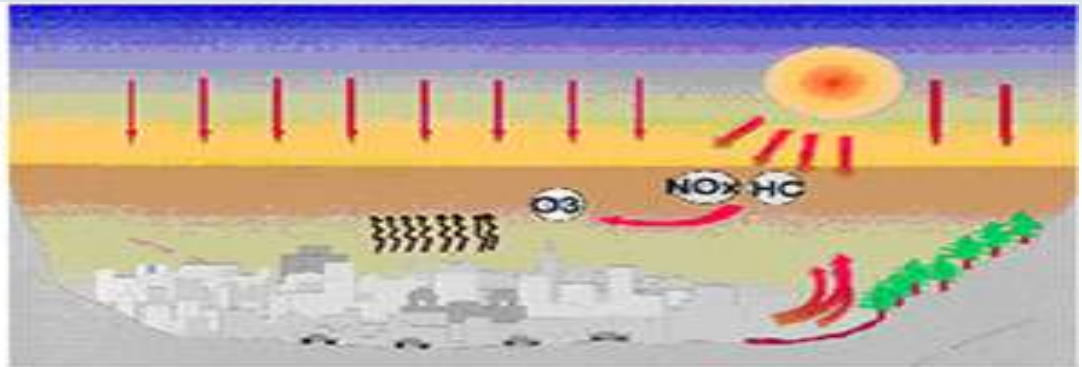
# Surrounded by Mountains...



# Picture of Mexico City



The Smogmachine



# Solutions

- to reduce air pollution, the city promotes public transportation (buses, subway)
- city is also testing buses that run on cleaner burning fuels
- workshops to educate people about the environment
- new restrictions on car use



# Driving Restrictions

- In an effort to reduce car emissions in Mexico City driving restrictions have been placed on the people.
- **Monday:** no driving if license plate ends with 5 or 6.  
**Tuesday:** no driving if license plate ends with 7 or 8.  
**Wednesday:** no driving if license plate ends with 3 or 4.  
**Thursday:** no driving if license plate ends with 1 or 2.  
**Friday:** no driving if license plate ends with 9, 0 or a letter.  
**Saturday and Sunday:** All vehicles may be driven.

# Amazon Rainforest

- largest rainforest in the world
  - most of the rainforest is in Brazil
  - a hot, humid, and rainy tropical climate
  - home to a huge variety of plants, trees, insects, birds, & animals
  - produces 1/3 of the earth's oxygen
- \*AKA the lungs of the earth



# Destruction of the Amazon Rainforest

- In the 1950s, the Brazilian government began building a major highway system.
  - opened rainforest to loggers who used slash and burn methods to clear land quickly
- Brazil's population has increased--parts of rainforest are being cut down to create farms
  - cattle farms aren't a good use of the land
  - soil is lacking in nutrients, so low crop yields are the norm



# Before...





# After...



# Rainforest Clearing









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# Results of Deforestation...

- Plants, insects, and animals are losing their homes; many are endangered, may become extinct
- loss of trees increases carbon dioxide, a gas that contributes to global warming
- loss of plants and animals that may have beneficial uses (cure for cancer...)



# Solutions...

- The government is working to fix the deforestation problem by passing laws on cutting down too many trees.
- Environmentalists and entrepreneurs are coming up with ways for people to make a living from the rain forest without destroying it – raising iguanas for meat, gathering/selling nuts, and ecotourism





# Oil-Related Pollution in Venezuela

- one of the world's leading producers of oil
  - has been producing oil for about 100 years
- oil production has boosted economy
  - main source of income for many people
- oil production results in toxic wastes, air pollution, and oil spills





# Problems...

- Venezuela's coast has become polluted with oil.
  - oil spills have damaged the environment
  - hurts the ability of fishermen to earn a living



# Problems...

- Venezuela leads South America in the production of carbon dioxide, which is a by-product of burning fossil fuels like natural gas & oil.
  - can cause breathing problems for children & elderly
  - contributes to global warming

Venezuela's Lake Maracaibo has been hit hard because it is the home to major oil rigs and the pollution that goes with it if safety standards are not put in place and enforced.



# Lake Maracaibo, Venezuela



This picture represents Lake Maracaibo's past.



# Problems...

- Oil businesses have damaged Lake Maracaibo (largest lake in South America).
- Large amounts of oil have been removed from the area so the land is changing.
  - eastern shore of the lake is dropping about three inches a year
  - government is having to take precautions to keep water from flooding into nearby towns

# Oil Slick in Lake Maracaibo

- An oil slick, likely related to bilge pumping, can be seen as a bright streak northeast of El Triunfo in this satellite image from February 23, 2007.



# Oil Pollution's Effects







# Problems...

- money from selling oil is the country's main source of income
- Venezuelans are motivated to keep producing, selling, and burning oil– they need to feed their kids and keep a roof over their heads

# Solutions...

- People are becoming aware that the cost in the long term may be too great.
- Groups are calling for renewable energy sources and the clean-up and prevention of pollution.

# Latin America Environmental Issues

## Processing Activity

### Superhero Challenge

#### Character Choice

- A. Individually, or with a partner, students will create a superhero to combat one of the pollution issues. The superhero should have an original name, as well as unique powers that will aid him/her in the quest for destroying the enemy (air pollution/oil pollution/deforestation).
- B. Individually, or with a partner, students will use personification to turn the pollution issue into a villain. Make sure the villain has a name that plays off of one of the 3 types of Latin American pollution. The villain needs to have characteristics of the real environmental concern incorporated into its story as well.

# Latin America Environmental Issues

## Processing Activity

- Product Choices:
- A. Design a superhero/villain from top to bottom. Your detailed drawing should include an original costume, and a dialogue bubble that gives details about his/her name and powers.....
- B. Compose an original short story or script that shows a battle between good and evil on the pollution front. Each piece of writing needs to include the story elements that you've been working on in language arts class.
- C. An original piece of free verse or an I Am poem that highlights the characteristics of one of the environmental issues can be composed. While including factual information in your poem is a must, figurative language works well in this type of writing, too.