

# Air Under Pressure

Trace why pollution builds up in Mexico City and how it affects people.

**SS6G2.a** "Explain the causes and effects of air pollution in Mexico City, Mexico."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## 1 READ AND MARK \_\_\_\_\_ Read it twice

**YOUR JOB** Underline causes of air pollution or trapped pollution, and circle effects. Choose two underlined causes and number each with a matching circled effect using the same number.

### Why the Air Can Turn Hazy

- ① Mexico City lies in a high basin surrounded by mountains. The mountains can slow the movement of air, so dirty air may stay over the city instead of blowing away. At certain times, a layer of warmer air sits above cooler air near the ground. This temperature inversion acts like a lid. It can trap exhaust, dust, and other pollutants close to the millions of people who live and travel in the city through its busy streets.
- ② Cars, buses, trucks, and motorcycles release pollutants when they burn gasoline or diesel fuel. Heavy traffic makes this source especially important. Factories can add pollution when they burn fuels for production, and construction can send dust into the air. Mexico City's large population increases the demand for travel, electricity, and goods. Sunny conditions can cause some pollutants to react and form ground-level ozone, a gas that can harm people when its amount is high in the air.
- ③ Breathing polluted air can irritate the eyes and throat. It may trigger coughing or make asthma and other breathing problems worse, especially for children, older adults, and people who work outdoors. Hazy air can hide distant buildings and mountains, reducing visibility. When pollution levels are high, city leaders may limit some vehicle use or advise people to spend less time exercising outdoors. Cutting emissions from transportation and industry can improve air quality and protect health.

**2 ANSWER WITH EVIDENCE** \_\_\_\_\_ Use the passage

**1** How do the mountains, basin, and temperature inversion help pollution build up over Mexico City?

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**2** Name two human sources of air pollution named in the passage.

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**3** What can sunny conditions cause some pollutants to form, and why can it be harmful?

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**4** Describe two effects that polluted air can have on people or the city.

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**3 YOUR TURN** \_\_\_\_\_ Your own words

Write exactly three sentences for a city health notice. Name two causes of pollution in the first sentence, explain how Mexico City's setting can worsen the problem in the second sentence, and describe two effects in the third sentence.

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**PART 1 • READ AND MARK**

Underline causes of air pollution or trapped pollution, and circle effects. Choose two underlined causes and number each with a matching circled effect using the same number. Accept any marking that follows this job and points at the right text.

**PART 2 • ANSWERS**

| # | QUESTION                                                                                         | ANSWER                                                                                                                                                          |
|---|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | How do the mountains, basin, and temperature inversion help pollution build up over Mexico City? | <b>They can slow air movement and trap pollutants close to the ground, so dirty air does not blow away easily.</b>                                              |
| 2 | Name two human sources of air pollution named in the passage.                                    | <b>Any two: vehicles burning gasoline or diesel fuel, factories burning fuels, or construction dust.</b>                                                        |
| 3 | What can sunny conditions cause some pollutants to form, and why can it be harmful?              | <b>Sunny conditions can help pollutants react to form ground-level ozone. High amounts of ozone can harm people.</b>                                            |
| 4 | Describe two effects that polluted air can have on people or the city.                           | <b>Any two: irritated eyes or throat, coughing, worsened asthma or breathing problems, reduced visibility, or less outdoor exercise when pollution is high.</b> |

**PART 3 • YOUR TURN (SAMPLE ANSWER)**

Heavy traffic and factory fuel burning release pollutants into Mexico City's air. Mountains around the basin and a temperature inversion can keep that pollution close to the ground. The polluted air can worsen asthma and make distant places harder to see.

Accept equivalent cause-and-effect explanations supported by the passage. For Part 3, students should connect two pollution sources, the trapping effect of the basin or inversion, and two accurate effects.