

Name:

## **Air quality and weather**

Did you know that air quality is affected by the weather and the shape of the land?

On colder winter nights we burn wood in fires, which puts smoke pollution in the air.

When it's windy the pollution gets carried away. When there is no wind it sticks around.

Hills act as a barrier and stop pollution from blowing away. Towns in valleys are sometimes sheltered from the wind and can therefore have very bad air quality in winter.

During the day, the sun warms up the ground and the ground warms up the nearby air. At night the warm air near the ground gets trapped by clouds. If it is a clear night, the warm air is free to lift upwards. This layer of warm air above the town is called an inversion. The inversion acts as a lid and keeps pollution near the ground, trapped around the town.

Drainage flow is what we call cold air that sinks down from the tops of hills after cold nights. Drainage flow can trap pollution in from the sides.

### ***Key Points to Take Away***

- Wind can blow smoke pollution away.
- The weather and hills can trap smoke pollution in around towns.

1. What does wind do to pollution?

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2. What happens to pollution if there is no wind?

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3. Why do towns in valleys sometimes have bad air quality?

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4. What is a temperature inversion?

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5. What happens to pollution when there is a temperature inversion?

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