

7.8 Noise Pollution

Name: _____ Class: _____ Date: _____

Total: 9 marks

Objective

Build the skills to answer exam questions on **noise pollution**.

You must be able to:

- define **noise pollution** 噪声污染 and its sources
- describe effects on humans and wildlife
- suggest ways to reduce it

1 Worked examples

Study these first. Each one shows the method for a question type used later —follow the steps and you can do the Practice and Exam-style questions yourself.

■ What it is

Noise pollution is unwanted or harmful sound, mostly from **traffic, industry, construction, and aircraft**, measured in **decibels (dB)**.

■ Effects on humans

Chronic noise causes **stress, sleep disruption, hearing loss** (at high levels), and raised blood pressure.

■ Effects on wildlife

Noise (especially **underwater sonar/ship noise**) interferes with animal **communication, navigation, and mating** —for example, disorienting whales and dolphins.

■ Reducing noise

- **Barriers** (sound walls along highways).
- **Quieter technology** and mufflers.
- **Zoning** (separating noisy areas from homes) and limits on hours.

■ A worked link

A highway sound wall reflects/absorbs traffic noise, lowering the decibel level reaching nearby homes.

2 Practice

Now apply the methods above.

2.1 Give one source of noise pollution. [1]

2.2 State one effect of chronic noise on humans. [1]

2.3 State one way to reduce noise pollution. [1]

3 Exam-style questions

3.1 Underwater noise pollution most harms marine animals by disrupting their [1]

- **A** communication and navigation
- **B** photosynthesis
- **C** digestion
- **D** skeletons

3.2 A new highway is built near a residential area.

(a) State one human health effect of the added noise. [1]

(b) Suggest two ways to reduce the noise reaching homes. [2]

3.3 Explain how ship noise can affect whales. [2]

4 Go further

You are now ready for the real exam questions on this subtopic:

- work through the **7.8 Noise Pollution** lesson on the **Learn** page;
- read the **Noise Pollution** section of the AP Environmental Science handout on the **Know** page.

Solutions

2.1 Any one: traffic, industry, construction, aircraft.

2.2 Any one: stress, sleep disruption, hearing loss, high blood pressure.

2.3 Any one: sound barriers, quieter technology, zoning, hour limits.

3.1 A —communication and navigation.

3.2 (a) Any one: stress, sleep disruption, hearing effects. (b) Any two: sound walls, quieter road surfaces/vehicles, zoning/hour limits, tree buffers.

3.3 Ship noise masks the sounds whales use to communicate and navigate, disorienting them and interfering with finding mates or food.