

## Tuning a Piano



Strange noises come from the apartment above an unused barn at Caramoor, a music venue and garden facility one hour north of New York City. Inside the apartment, Russell Gordon stands over a Steinway piano. He's hitting keys methodically, listening, and making adjustments. No one, however, would call what he's doing playing the piano. Not exactly; he isn't making music. He's making sure other people can.

Gordon is a piano tuner. He started tuning pianos 40 years ago. He worked as a biochemist for years before he realized his father's job as a piano tuner wasn't a bad gig. "I realized that it wasn't so bad. The Mark Twain line is 'The older I got, the more my father knew.' So I came back and apprenticed with him."

Gordon opened his own piano tuning business in Washington, D.C. His father used to tune the pianos at Caramoor. Gordon came back to the New York area when his father retired. Gordon's been tuning the pianos at Caramoor for 27 years.

Standing over the piano, Gordon has a view into its inner workings. The outer black part of the piano is called the case. Inside, the strings run through a

harp, or plate. Near the playing end of the piano, the strings are threaded around tuning pins. The pins are nailed into the pin board, a part of the piano that is not visible. Underneath the strings is a sounding board.

The action of striking a key causes a hammer to hit the appropriate strings. “There is no such thing as a perfect piano,” Gordon says, as he laughs. Tuning the piano, explains Gordon, is a process of trying to “equalize all the errors so the piano sounds good.” Some of the pianos at Caramoor are left outdoors where there are no humidity controls. Gordon says those pianos are harder to tune. “It’s a challenge, to say the least,” he says.

“Before the advent of iPods, this was all done by ear. The piano tuner would use a tuning fork to set your ‘A,’” explains Gordon. “Nowadays we have computers.” Gordon uses a program created by a company called Reyburn CyberTuner. Explains Gordon, “It measures the piano, and then you can set it up to determine how you want the piano tuned. It doesn’t get tired; and it has memory.”

The technology doesn’t turn just anyone into a technician. Only trained tuners can use it. But it is a time-saver. That’s helpful when it comes to concerts at Caramoor. Sometimes Gordon gets only a half an hour to tune the piano between rehearsal and the performance. “I don’t have time to sit down and start tuning the piano. But what I can do is go to the memory, and if something’s changed I can put it back to where it was.”

To tune the piano, Gordon uses a wrench called a tuning hammer. Gordon’s tuning hammer is carbon fiber, custom-made by a company called Fujan. Gordon lifts and places the hammer 250 times in one tuning, so the weight makes a difference. The carbon fiber design also reduces flex. This gives Gordon more control over the tuning.

Piano tuning is part art and part science. You’re trying to get the arrangement of fourths, fifths, sixths, thirds—all musical intervals—so that when you play them, they waver at the right speeds. Gordon listens to intervals when he’s tuning. Turning the pin adjusts the tension on the string, which, in turn, adjusts the pitch. “The real skill is in making it stay there,” says Gordon. There’s a

lot of tension and friction in the strings and its surroundings. “The challenge is to leave the tuning pin in a position so that when someone hits the piano really hard, they’re not gonna knock it out of tune.” Gordon says the goal is to keep the piano stable and give the musician control over the instrument.

At the same time Gordon says he never knows quite what he’s doing when he pulls the tuning hammer. Much of the work is done by feel. “It’s automatic and based on the feedback I get from the piano, the note, the ear,” he says. He attaches the hammer to the top of the tuning pin, sounds the note, listens and makes an adjustment with the hammer. He makes short, swift adjustments and always tests the note repeatedly. He places foam mutes inside the piano to isolate individual strings.

Watching him at work, one would think Gordon is an expert pianist. But he doesn’t play! “Everybody assumes I do, but I was the stubborn kid who didn’t want to practice. My mother said, ‘You’ll be sorry.’ She was right!”

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. What is Russell Gordon's job?

- A chemistry professor
- B reporter
- C piano tuner
- D trumpet player

2. What does this passage describe?

- A This passage describes the novels of Mark Twain.
- B This passage describes how Gordon tunes pianos.
- C This passage describes how guitars are made.
- D This passage describes how Gordon's father became a piano tuner.

3. To tune a piano, Gordon uses a computer program, places a tuning hammer 250 times, and never quite knows what he is doing.

What can be concluded from this information?

- A Learning how to use a computer is difficult.
- B Tuning a piano is a waste of time.
- C Gordon would rather be a biochemist than a piano tuner.
- D Tuning a piano is a complicated process.

4. What is an important skill for a piano tuner to have?

- A the ability to listen carefully
- B the ability to run long distances
- C the ability to persuade people to change their minds about something
- D the ability to speak several languages

5. What is this passage mostly about?

- A biochemistry
- B Washington, D.C.
- C a piano tuner and piano tuning
- D a music venue and garden facility

6. Read the following sentence: "Tuning the piano, explains Gordon, is a process of trying to 'equalize all the errors so the piano sounds good.'"

What does the word **tuning** mean?

- A playing a musical instrument in front of a large group of people
- B making adjustments to a musical instrument so that it plays correctly
- C traveling from one city to another in order to find work
- D studying how another person does a job in order to learn it yourself

7. Choose the answer that best completes the sentence below.

Gordon works as a piano tuner \_\_\_\_\_ he is not a piano player.

- A although
- B in summary
- C obviously
- D such as

8. What are the three things Gordon does after attaching his hammer to the top of a tuning pin?

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9. What does Gordon say is a challenge when working with tuning pins?

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10. Name at least two skills piano tuners must have. Support your answer with evidence from the passage.

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## Teacher Guide &amp; Answers

Passage Reading Level: Lexile 800

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8. What are the three things Gordon does after attaching his hammer to the top of a tuning pin?

**Suggested answer:** Gordon sounds the note, listens, and makes an adjustment with his hammer.

9. What does Gordon say is a challenge when working with tuning pins?

**Suggested answer:** Gordon says that leaving a tuning pin in a position that will prevent people from knocking the piano out of tune when they play is a challenge.

10. Name at least two skills piano tuners must have. Support your answer with evidence from the passage.

**Suggested answer:** Answers may vary, as long as they are supported by the passage. For example, students may name precision as a skill that piano tuners must have, because putting tuning pins in the proper position is a challenge. Students may also name listening carefully as a necessary skill, because the adjustments piano tuners make are based on aural feedback.