

Student Comprehension Worksheet

Directions: Read "[Saving Notre Dame's sound](#)" and answer the following questions.

Introduction

1. What is Notre Dame and where is it located? What event damaged Notre Dame in 2019?

2. What role do acoustics researcher have in restoring Notre Dame? What field has their work put in the spotlight?

Aural history

3. What is a sound wave? What is the difference between an echo and reverberation?

4. What is reverberation time? Name two factors that can affect a room's reverberation time.

Sound of silence

5. What did researcher Brian Katz record in 2013 and why is this recording considered special? Describe one acoustic property that Katz measured. Why is this measurement important?

6. What path did Katz take to become an acoustician?

Music from ruins

7. What other buildings' acoustics have been re-created? How do those re-creations compare with Katz's work on Notre Dame?

8. What does the author compare to acoustic time machines? Why is the simile appropriate?

The measure of a cathedral & Tuning up

9. What was Notre Dame's average reverberation time in 2013? What characteristic of the sound affects reverberation time?

10. How might Katz's simulation of Notre Dame aid rebuilding efforts?

Crafting a soundscape

11. Who is Mylène Paroden? How does her work complement Katz's work?

12. What does acoustician Damian Murphy mean when he says that no historic building is ever completely static? How is this relevant to Notre Dame's rebuilding?