

THE RHYTHM OF ROBIE

GRADE: 9–12

TIME: Two 60-minute sessions

A building, like music, is made up of many parts that work together in harmony. In this lesson, students will study the musicality of Frank Lloyd Wright’s iconic Prairie style design, the Robie House. Students will explore graphic scores, which represent musical scores artistically using nontraditional shapes. After viewing the ceiling and wall of the Robie House as a graphic score, students will create their own musical interpretation of one of Wright’s architectural works. This lesson works best with students who have a basic understanding of reading music or can be taught in collaboration with a music teacher.

INTEGRATED SUBJECTS: Visual Arts

OBJECTIVES

MATERIALS | RESOURCES

Internet access and speakers or headphones to play sounds aloud

Examples of graphic scores (Appendix A)
Image of the Robie House ceiling close-up (Appendix B)

Image of Robie House wall full view (Appendix C)

If available, instruments from a music classroom

“Graphic Score” video:

<https://youtu.be/jiYlZxpS-BQY?si=6QcQlMEi3q68Fltq>

Optional: pencils, colored pencils, and sketch paper

1. Use the sense of hearing to experience a work of architecture.
2. Interpret the iconic living room and art glass of Wright’s Robie House as a sound.
3. Work collaboratively to design and perform a graphic score.

ESSENTIAL QUESTIONS

1. What is the relationship between design elements and musical elements?
2. How do graphic scores differ from traditional musical scores?
3. How can a work of architecture be interpreted using sounds?

LESSON PROCEDURE

EXPLORE

Session One

- **Begin by asking students:** How are design elements and musical elements related? Discuss how pattern, rhythm, and repetition are used in both architectural design and music. Explore how these elements can create a cohesive whole in both contexts. Remind students that both architecture and music are forms of art meant to be experienced.
- **Introduce graphic scores to students.** Tell students that graphic scores are musical scores that use nontraditional shapes and are open to interpretation based on the instruments used to play them and the musician's interpretation of the artwork. Show examples of graphic scores (Appendix A).
- **Direct students' attention to the graphic score by Clara Claus with Bryce Dessner.** Instruct students to make a prediction after looking at the graphic score as to what the song might sound like. How many instruments do you think will be used? What sounds and/or instruments do you expect to hear? Do you expect the piece to be loud or quiet? High-pitched or low-pitched? Fast or slow? What mood do you expect the performers to try to express in their performance?
- **Play excerpts of "Graphic Score" by Clara Clause with Bryce Dessner aloud for students to experience the sound together** (<https://www.youtube.com/watch?v=jiYIZXpSBQY>). Play the first 5 minutes of the video, looking for the images on the Appendix by following their timestamps. The entire video is over 30 minutes long, so we suggest playing only 5-10 minutes aloud to maintain student engagement. As students listen, ask students to evaluate the accuracy of their predictions. What instruments and sounds were used to represent the graphic score musically? What surprised you? How did you feel listening to the song? **Gather students' reactions.**

ENGAGE

Session One

- **Introduce Frank Lloyd Wright and the Robie House to students.** Explain to students that the Robie House is Wright's most masterful Prairie style building. Wright and his team of draftspeople and artisans designed the woodwork, furniture, carpets, and windows specifically for this building. Every element was made to go together for this unique space. Tell students that Wright's design was heavily influenced by nature and geometry. Show images of the Robie House to students. Information and resources are available on the Teaching by Design website at <https://www.teachingbydesign.org/about/robie-house/>.
- **Distribute a close-up image of the Robie House ceiling (Appendix B).** Ask students to discuss what patterns they identify in the woodwork of the ceiling. What differences in colors, materials, and textures do you notice? What patterns do you notice? How could you interpret different parts of the ceiling as different sounds?
- **Tell students that they will be interpreting the Robie House as a graphic score.** Remind students that there could be endless interpretations of the ceiling as a sound, and that the one they will be sharing is one of many approaches. Clap the pattern of notes on Appendix B that correlate with the pattern of the ceiling's woodwork. After clapping the pattern through once, guide students to clap along with you.
- **Next, ask students to replace the sound of clapping with a noise of their choice.** Tell students they can make a sound using their voice or an object. Encourage students to choose sounds that capture the feeling of the Robie House. Perform the sound together.
- **Pose the following questions to students:**
 - ◇ How many different kinds of sounds were present in the class's interpretation? How did your understanding of Wright's vision for the Robie House influence your chosen sounds? Which of your classmates' sounds stood out to you? How did different colors and materials present on the ceiling influence your sound?
 - ◇ Optional Extension: If your students are able to perform the clapping pattern with ease, direct students to dictate the musical notes that represent the surface of the ceiling instead of the woodwork. Clap or perform together.
 - ◇ Optional Extension: Provide percussion and/or string instruments for students to use in their performance.

LESSON PROCEDURE (continued)

DESIGN

Session One

- **Split students into groups of 3-5. Distribute the full view image of the Robie House wall and ceiling (Appendix C). Ask students to consider the expanded image of the Robie House wall and ceiling. Ask students to once again notice the patterns present in the image. Guide students to consider the woodwork, walls, art glass, and many colors and textures. After discussing students' observations of the full image, direct students to interpret the walls and windows as a graphic score. Encourage students to be as creative as possible in the mediums they use to create sounds, especially in their interpretation of the colorful art glass windows and elements of nature in view.**
 - ◇ Optional Extension: Provide percussion and/or string instruments for students to use in their performance.
- **Check in on groups as they work, and offer advice and feedback as needed, while encouraging groups to make their own creative choices.**
- **After groups have chosen their sound interpretations, direct groups to take turns sharing their work aloud to the class.**
- **After sharing, discuss students' reactions to their classmates' sounds.**
 - ◇ What similarities exist between the various groups' interpretations of the Robie House wall? What stood out to you in your classmates' interpretations?
- **Tell students that they will be asked to interpret another graphic score tomorrow. Remind students to bring any instruments or tools to create the sounds they will need.**

DESIGN

Session Two

- **Review content from Session One as needed. Split students into groups of 3-5 (same or different groups). Provide each group with one photograph of Wright's architecture (Appendix D). Allow time for students to research their assigned space.**
 - ◇ Optional: Let students research Wright's architecture and then select architecture that inspires them.
- **Ask students to imagine what that space might sound like.** How would the space sound when empty? How would the space sound like when full of people or with music playing? How would it feel to be in this space? What textures, colors, and shapes stand out to you in the image of the space? How can I represent this architectural work using sound?
- **Tell students to interpret their architectural image as a graphic score. Let students collaborate in their groups or work on their own if preferred. Give students ample time to plan their sound interpretation of their room. Challenge your students to create a sound that is at least 30 seconds long. Ask students to consider:** Which sounds accurately convey the feeling of your space? What sounds reflect the textures, colors, and shapes of your space?
- **Provide time as needed for all students to compose their sound interpretation.**
 - ◇ Optional Extension: While students wait for their classmates to finish, send students to other areas of the school building to explore how their sounds change when performed in another space.

LESSON PROCEDURE *(continued)*

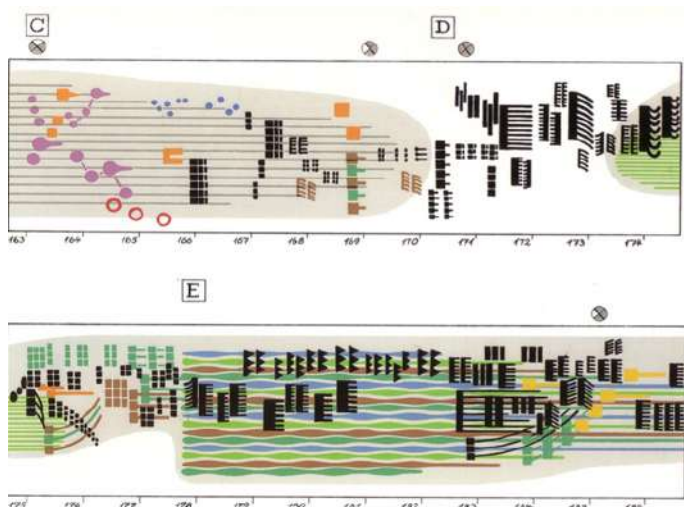
CRITIQUE & INTERPRET

Session Two

- **Guide students to take turns sharing their architectural images and performing their sound interpretations.**
- **After each group performs their sounds, let listening students share questions and comments. Pose questions to students to demonstrate their understanding of the assignment. Some possible questions include:** What inspired your chosen sounds? What instruments or non-instruments did you include to make your sounds? Which sounds were easier to create? Which sounds were more difficult to create? How did you reflect the architectural experience of the space in your sound?
 - ◇ **Differentiation:** An optional third session may be needed to complete student performances. A third session can also be added for students to create their own architectural sketch to interpret as a graphic score. Provide pencils, sketching paper, and colored pencils for students to sketch their space. Once again, let students perform or record their sounds to share with the class.

Graphic scores are musical scores that use nontraditional shapes to represent sounds. Unlike traditional five-line musical scores, graphic scores are open to interpretation by the musician to decide what sounds and instruments will be used. Different colors, textures and shapes convey sounds in abstract ways. Graphic scores grew in popularity in the 1950s and 1960s by experimental post-war composers.

György Ligeti, *Artikulation*, 1958

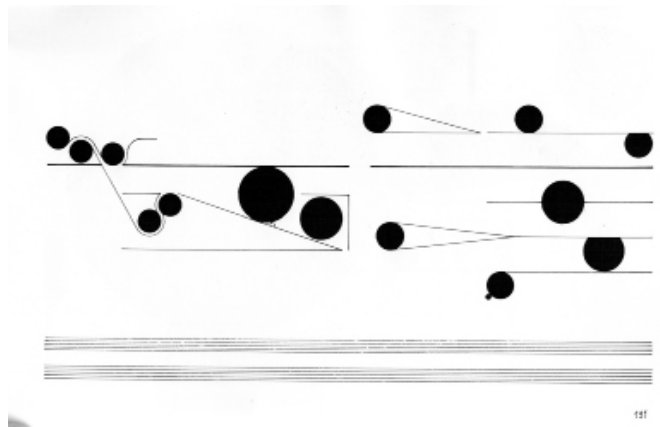


Clara Claus with Bryce Dessner, *Graphic Score*, 2013



[00:02:50]

Cornelius Cardew, *Treatise*, 1967



[00:04:18]

ROBIE HOUSE CEILING CLOSE-UP



ROBIE HOUSE WALL

APPENDIX C

FULL VIEW



IMAGES OF WRIGHT'S DESIGNS

APPENDIX D



Fallingwater, 1938



S.C. Johnson Wax Headquarters, 1936



Home and Studio Playroom, 1895



Marin County Civic Center, 1957

IMAGES OF WRIGHT'S DESIGNS

APPENDIX D cont.



Taliesin, 1937



The Rookery, redesigned in 1905



Unity Temple, 1905-08



Wingspread, 1939

IMAGES OF WRIGHT'S DESIGNS

APPENDIX D cont.



Ennis House, 1924



Beth Shalom Synagogue, 1954



Guggenheim Museum, 1959