



Brien Engel

“Glass Harp Music”

Grades: 3-8

Assembly Performance

Performance Length: 45 minutes

Audience Limit: 300

About the Artist

In addition to being one of very few professional glass harpists in the world, Brien Engel has made notable strides in bringing unusual and challenging styles of playing to the instrument, particularly as a jazz musician. A Georgia resident for 23 years, Brien has now performed in hundreds of schools across the nation with a glass music program, and performed for many libraries, nightclubs, senior communities, festivals, and college campuses. He has toured Germany and performed in Dresden, Munich, Koln, and Bonn. From 1997 to 2000, he also served as president of Glass Music International, an organization devoted to the promotion of glass music.

Before the performance:

- Find out what students already know about ways to produce sounds with different pitches.
- What students play instruments? How do those instruments produce sound?

After the performance:

- Ask students what they learned about music and sound.
- Have students write, draw, dance, sing about, or act out their favorite part of the performance.
- Use rubber bands, bungee cords, tuning forks or other materials to explore the vibration and pitch of sounds.
- Listen to more music composed for glass harmonica by Mozart, Carl Leopold Rollig, and others.

About the Program

Learn all about musical glasses and the glass harp as Brien Engel makes inspiring music from a collection of drinking glasses. Fine-tuning to exact pitches using water, Brien uses friction to make music. His performance covers the evolution of the glass harp, including Tibetan singing bowls, turkey calls, Musical Saw, and the Armonica—Ben Franklin's "revolutionary" glass instrument. Exploring instruments made from everyday materials and water-tuned music, Brien connects physics concepts and sound. Be warned, lunchtime in the cafeteria may never sound the same again!

Performance Set-up Requirements:

A performance area of at least 15' x 10', 2 rectangular tables, 2 chairs, ice cubes to fill a small pitcher if available, and a simple PA system if available. Students may be seated on floor or in rows of chairs.

Classroom Management

Please note that Young Audiences' policy mandates that the classroom teacher is to be present during the entire program or residency. Should the teacher leave, the artist is instructed to leave also. The teacher is responsible for managing classroom behavior during the program or residency.

TEKS:

Science. K.7, 1.5, 1.7, 2.5, 2.7, 3.6, 4.6, 5.7, 5.8, 6.6, 6.8, 6.9, 7.6, 7.7, 7.8, 8.7, 8.10, High School. Integrated Physics and Chemistry. 5, 8. Social studies. K.11, K.12, 1.15, 2.15, 3.12, 3.14, 4.20, 5.23, 6.15, 6.17, 6.18, 7.19, 8.27, High School. History Since Reconstruction. 20, 21 World History 20, 18 Music. 1.5, 1.6, 2.5, 2.6, 3.5, 3.6, 4.5, 4.6, 5.5, 5.6, 6.5. 6.6, 7.5, 7.6, 8.5, 8.6, High School. I, II. 5, 6.

Word List

- glass harp—a musical instrument consisting of a series of glass bowls or goblets
- vibration—back and forth motion of matter
- pitch—highness or lowness of a sound
- frequency—speed of a vibration; higher frequencies have higher sounds
- interval—the relationship between two notes or pitches
- harmony—combination of musical tones or notes into chords and progressions of chords
- friction—rubbing of one surface against another
- musical saw—the use of a handsaw as a musical instrument, usually played with a bow
- armonica—Ben Franklin's musical invention; a variation on the glass harp
- spindle—a shaft or rod which turns

Classroom Connections

Language Arts:

- Write a song, poem, story or essay about the glass harp, or another musical instrument used in the performance.

Math:

- What is the relationship of the size, thickness and other factors of a glass bowl to its pitch?

Social Studies:

- Find out more about historical and cultural examples of water-tuned instruments, such as the Jalatharangram music of India, Tibetan singing bowls and examples from China, Japan and the Middle East.
- Find out more about Ben Franklin's many inventions.

<http://library.advanced.org/22254/inventions.htm>

Science:

- Find out more about the physics of sound.
- <http://www.physics.uoguelph.ca/summer/scor/articles/scor231.htm>
- Find out more about how glass is blown.

Resources:

- Brien Engel's glass harp site:
<http://www.glassharp.org>
- CD's: *Christmas Glass* and *Optimistic Voices*
- More glass music:
<http://www.geocities.com/Vienna/7597/indexgb.htm> and
<http://www.mindspring.com/~glassmusicintl/>
- Building glass armonicas:
<http://finkenbeiner.bcn.net/index.html>
- *Ben and Me: An Astonishing Life of Benjamin Franklin* by Robert Lawson, 1988, Sagebrush.
- *How to Play Nearly Everything* by Dallas Cline, 1998, Music Sales Corporation.
- *The Oxford Companion to Music* by Alison Latham, 2002, Oxford University Press.
- *The Oxford Companion to Musical Instruments* by Anthony Baines, 1992, Oxford University Press.

Information in this Study Guide was provided by Young Audiences of Houston.