

Making Music and Playing the Blues

Brief Description

Students learn about the blues, research the construction of musical instruments, create an instrument using provided materials, and write a report about the process and the product.

Objectives

Students develop an understanding of how musical instruments have been modified over time and an understanding of the role of math in constructing musical instruments. They will be able to describe the shapes of a variety of musical instruments.

Key Concepts

measurement, geometry, musical instruments, blues, musical forms

Materials Needed

Computers with Internet access; Web sites such as [Making a Shoe-Box Guitar](#), [Mathematics of Music](#), [Instruments](#), and [Blues Links](#); plastic cups, craft sticks, tacks, rulers, elastic bands

Lesson Plan

Overview: Explain the following to students.

- The blues is a musical form that has its origins in work songs sung by slaves in the United States.
- Blues songs tell stories about life experiences, particularly love and poverty.
- Blues singers, including Ray Charles, Billie Holiday, and Muddy Waters, are known around the world.
- Today, blues musicians use pianos, drums, and guitars, but in the past, they used instruments made from whatever was available, including pots and washboards.

Focus and Motivation:

- Show students pictures of a variety of musical instruments. Ask them to name musical forms in which those instruments are used.

Teach:

- Arrange students in groups of four. Explain to students that they are going to solve a problem faced by early blues musicians. The problem is to make an instrument they can use to play music.
- Distribute to each group one plastic cup, several craft sticks, tacks, a ruler, and elastic bands. Tell students that they will make a musical instrument from the materials provided.
- Explain that when the instrument is finished, they must prepare a written report containing 1. the reasons they chose that particular design, 2. a description and

illustration of a contemporary instrument that inspired the design, 3. the measurements of the instrument, 4. an explanation of how the measurements and design affect the sound of the instrument, and 5. a list of sources, including three Web sites, used to create the instrument and prepare the report.

Assessment

Students will keep a record of their group's activities, make a musical instrument, and write a report. Those three items will provide assessment data for each student and for the group in general.

Lesson Plan Source

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