

## Musical Instruments and Math

Grade(s): Kindergarten-2<sup>nd</sup>

Materials: paint stick, paper plates, glue, tape, glitter, paint, stickers, beads, and rubber bands

Content Standards

Music Fine Arts Standard:

**MU.K.2 2007 - PERFORMING MUSIC: Playing an instrument alone and with others** Students play rhythms using body percussion and classroom instruments. They maintain a steady tempo when playing with a group.

**MU.K.2.1 2007** Echo four-beat rhythmic patterns played by the teacher using body percussion or classroom instruments.

**MU.K.2.2 2007** Maintain a steady beat while playing an instrument in a group.

Visual Arts Standard:

**VA.K.7 2008 - CREATING ART: Studio Production: Understand and apply elements and principles of design in personal works of art, utilizing a variety of media, tools, and processes**

Students begin to recognize and apply the elements and principles and discriminate various lines, shapes, textures, and colors. They identify two and three-dimensional works of art and utilize appropriate media and processes in both types of artwork, demonstrating safe and proper use of materials.

**VA.K.7.1 2008**

Begin to recognize and use elements (such as line, shape, texture, and color) and principles (such as repetition) in artwork.

**VA.K.7.2 2008**

Discriminate between types of lines (characteristics), shapes (geometric), textures (tactile), and colors (primary/secondary hues) in own work and the work of others.

**VA.K.7.3 2008**

Distinguish between two-dimensional and three-dimensional works of art.

**VA.K.7.4 2008**

Identify and use a balance of two-dimensional and three-dimensional media and processes to express ideas, experiences, and stories.

The following recommended media and processes are appropriate for a grade band of Kindergarten through Grade 2:

**DRAWING:** Media: pencils, markers, chalks, crayons, oil pastels Processes: contour line, rendering, sketching

**PAINTING:** Media: tempera, finger-paint, watercolor crayons, watercolor; variety of brushes and paint applicators Processes: brush techniques, wet-on-wet, wet-on-dry, sponge, wash, resist

SCULPTURE/ARCHITECTURE/JEWELRY: Media: paper, papier-mache, clay, cardboard, wood, paper, foil, found objects, beads, wire, polystyrene foam Processes: additive, subtractive, modeling, constructing, carving

**MA.K.2 2000 - Computation** Students understand and describe simple additions and subtractions.

**MA.K.2.1 2000** Model addition by joining sets of objects (for any two sets with fewer than 10 objects when joined).

**MA.K.2.2 2000** Model subtraction by removing objects from sets (for numbers less than 10).

**MA.K.2.3 2000** Describe addition and subtraction situations (for numbers less than 10).

Learning Objectives:

- Be able to construct and play musical instrument
- Be able to model addition and subtraction by adding beats and subtracting beats from musical compositions
- Be able to maintain a steady beat by counting aloud and to themselves
- Be able to distinguish between two-dimensional and three-dimensional works of art

Description of the Core Content Lesson

I will teach the students how music relates to math and math skills, such as counting. I also want my students to understand different musical instruments and the basic structure of multiple instruments. I want my students to be able to identify differences in instruments after completing this lesson.

What I Will Teach

While looking at various musical instruments students will be able to recognize what different shapes make up the instrument. After visually seeing instruments, I will instruct the students on how to construct a 3 dimensional instrument themselves. Students will be taught to how play their instruments and maintain a steady beat. Students will be taught how to count beats in music measures by playing the beats in each musical measure. Students will practice adding beats to measures and subtracting beats by learning their classmates' rhythms.

Steps to introduce lesson:

1. Review musical instruments and their structure
2. Discuss what could be used to recreate their instrument of choice
3. Practice songs
4. Clap out songs rhythm as a class
5. Develop rhythms for class to mirror

Resources:

- Images of different instruments
- Computer
- Music

### Description of the Visual Activity

For the visual activity, students will create their own musical instrument out of recycled materials for example: a paper plate, a paint stirrer, and rubber bands. After constructing their instrument, students will be able to recognize and separate shapes and colors. The students will identify two and three-dimensional works of art and have utilized appropriate media.

### Integration Rationale:

By doing this visual activity the math, visual art and music standards I have chosen will correlate appropriately. Students will make the musical instrument of their choice, and practice painting skills and review of already learned shapes that make up the structure of the instrument. Students will be able to play instruments at steady tempo as a class and design their own rhythms. Practicing their listening and creating rhythms will show the students how to apply numbers to musical beat through the skill of counting.

### Rubric

Objectives	How You Did		
<b>Project done in a timely fashion</b>			
<b>Student able to count rhythms and add and subtract correctly</b>			
<b>Overall appearance: time and effort were put in to the construction of the instrument</b>			

