

Place Value: Math Maracas



Math & Music

Grade
1

Math Common Core Standard(s) Grade 1

1.NBT.2c

Understand the following as a special case: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

1.NBT.3

Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.

Music (MD) Standard(s) Grade 1

1.1.a Classify classroom instruments by sight and sound such as wood blocks, triangles, rhythm sticks, maracas etc.

1.1.c Compare musical sounds: fast/slow, loud/soft (quiet), long/short, high/low

2.1.b. Sing, listen to, and describe music representative of different activities, holidays, and season in a variety of world culture.



CONNECTED OBJECTIVES

Students learn about percussion instruments used in Latin music; they create and play maracas using plastic water bottles and dried beans that represent two digit numbers (tens and ones place value).

MATERIALS & RESOURCES

- A pair of maracas
- Internet resources/PowerPoint introducing Latino music and percussive instruments.
- 100 beans per student/small group
- Empty plastic water bottles
- Blank labels
- Markers or crayons

KEY CONTENT VOCABULARY

- Ones
- Tens
- $>$, $=$, and $<$

KEY ARTS VOCABULARY

- Percussion
- Pitch

A S S E S S M E N T

- Number of beans left on table after creating the maracas
- Students shake maracas if their number is above or below the number provided
- Maracas contain the correct number of beans; students describe how the maraca shows what number it contains.
- Students line up the maracas in correct order



L E S S O N S T E P S

Introduce and define percussion and pitch

- Show pair of maracas and play for the students; Ask students to name the instrument
- Ask students to guess how the sound is made and what might be inside (beats, seeds, pits, stones, etc)
- Talk about maracas and other instruments that are common to Latin music (see PowerPoint on Blackboard)

Create Maracas using place value understanding

- Each student takes one empty bottle and counts out 100 beans into piles of 10
- Once a student(s) have completed this- they signal teacher; provide student with a two digit number. This represents the number of beans to put in the bottle. (place value=first number is the number of piles of ten, 2nd number is individual beans)
- Student puts the appropriate number of beans in bottle.
- The beans on the table should equal 100 minus the number of beans put in his bottle.
- Once he has determined that the number in the bottle is correct, he seals it with the cap and writes the number on the outside of the bottle.
- The rest of the beans are put back into the big container
- Optional: Early finishers can decorate bottles

Play the instruments

- Allow students to play the instruments
- Students shake their maracas if they are above or below a number provided
- Echo rhythms with your maraca and theirs—they play the same rhythm back that you model.

Order the instruments to compare numbers

- Students line maracas up in ascending order
 - Ask students how they would determine the order
 - Start with one student placing their maraca on the table
 - Another student comes up and places it to left or right; repeat process
 - Class gives a thumbs up or thumbs down to the placement
- Bring student attention to the height of the beans on the bottle—should go higher as the number of beans increase
 - Ask students to make predictions about what will happen to sound as the number of beans increases
 - Check the predictions with first and last number
 - How did sound change when the number of beans increase? Decrease?
Students check hypothesis by trying a couple of maracas
Discuss the findings

EXTENSIONS & OPTIONS SOURCES & RESOURCES

- Students get maracas and are divided into high and low groups based on their number
 - Improvise compositions- teacher is conductor pointing to high or low side to play
 - Student becomes conductor- repeat the process

Adapted from: *Musi-Matics* by Karin K. Nolan (Lesson 8) Roman and Littlefield, UK. 1982

G E T S M A R T T H R O U G H T H E A R T S

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