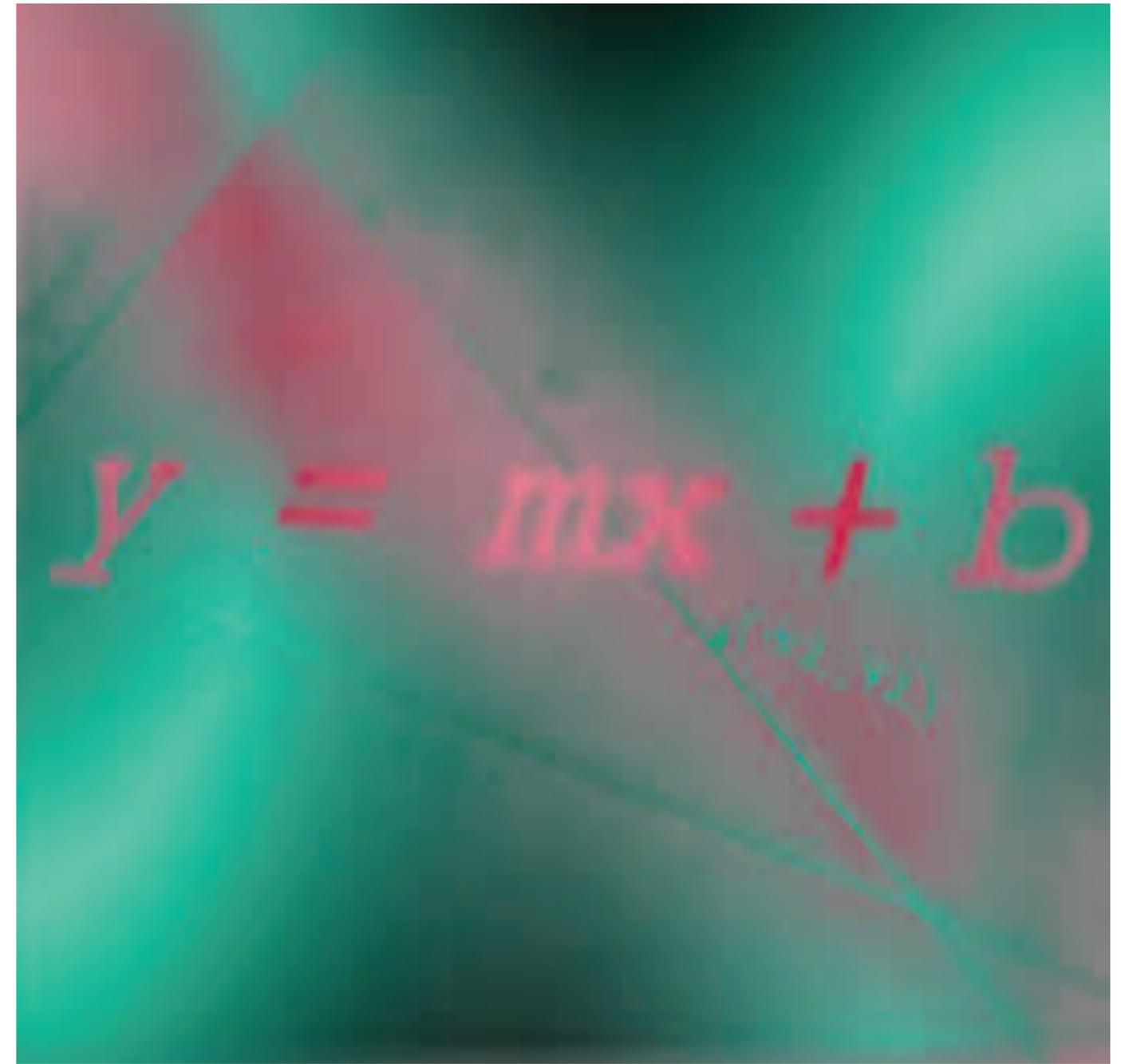


Notes/Reflections:

Form/Structure/Organization • Relationships • Operations •
Algebraic Thinking • Patterns • Word Problems



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Counting the number of beats in a common folk song, the students will use composition and classroom instruments to discover different combinations for accompaniment.

Essential Question:

Counting the number of beats in a common folk song, the students will use composition and classroom instruments to discover different combinations for accompaniment.

Process

- Practice counting the steady beat of various musical selections
- Warmup the class with “echo-clapping”. Clap, snap, pat, or stamp different four beat patterns and have the class repeat. Then extend this to eight beat patterns.
- Explain that the students will use rhythm and percussion instruments (or classroom “found sounds”), to compose instrumental parts for “This Land Is Your Land”. Introduce to the students that this will help them explore different combinations and groupings of numbers to solve problems in math.
- Listen to a recording of “This Land Is Your Land” with the class. Have the students count the number of beats, starting with the word “your”. (The first three words are pick-up notes. To keep things simple it is best to count from the beginning of the first full measure of melody.) Observe that there are thirty-two beats in the refrain. Take a few minutes to help the children learn the words.
- Explain that the students are going to compose patterns to be used as accompaniment for the recording. Share that this will give them opportunities to explore different ways to add, subtract, multiply, and divide to arrive at the number thirty-two.
- Demonstrate creating an eight beat pattern using note knocks. Brainstorm with the class to decide which note values will be used on which beats, and which instruments will play which values.
For example:
Ta Ti Ti Ta Ti Ti Ta-a Ta-a (quarter note, two eighth notes, quarter note, two eighth notes, and then two half notes) The quarter notes will be played with the hand drums, the eighth notes with the shakers, and the half notes with the triangles.
- Lead the class in discovering that this pattern needs to be played four times to equal thirty two beats. ($4 \times 8 = 32$) Discuss with the class that there can be more ways to come to the final number of thirty two. In the classroom composition the hand drum played eight beats, the shakers played eight beats, and the triangle played sixteen beats. ($8 + 8 + 16 = 32$)
- Have the children work in groups of three to create their own eight beat patterns for accompaniment. Distribute composition packets to help them do this. Have them write down and practice their pattern in their groups.
- Play the recording and have the students practice with the music.
- Have the students work in the group to create word problems illustrating the patterns they created. Have them share their “number talk” with the class, and then perform their composition with the recording.

Assessment

- The composition work sheets, can be assessed to address the music standards. The word problems can be assessed for the student’s mathematical comprehension. The performance of the accompaniment with the recording, and the students’ speeches explaining their equations can also be assessed.

Materials

- Composition packets (attributed to Craig Hurley, webpage: <https://hurleymusic.wikispaces.com/>),
- KnoteKnacks
- Composition worksheets
- recording of “This Land Is Your Land”
- pencils
- classroom percussion instruments, or “found sounds”

Vocabulary

phrase, beat, ostinato, pattern, multiply, divide, add, subtract, equal, sum, quotient, factors, word problems, product

Classroom Tips

This lesson will probably take more than one class period for everyone to share their composition. Establish rules and procedures reminding the students not to practice their own compositions while others are performing.

Extensions

This can be extended for older grades for the students with more complicated word problems. The different divisions of the beats can also be explored to work with fractions. Original compositions can also be created with melodies in the music classroom using xylophones, recorders, or keyboards. The notes used from the pentatonic scale, can be used for the equations, rather than types of percussion instruments.

Common Core Georgia Performance Standards

GRADE 3

MATH

MCC3.OA.1: Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .

MCC3.OA.2: Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.

MCC3.OA.3: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

MCC3.OA.4: Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = \square \div 3$, $6 \times 6 = ?$. $? \times ? = 48$, $5 = \square \div 3$, $6 \times 6 = ?$.

MCC3.OA.5: Apply properties of operations as strategies to multiply and divide. 13 Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)

MUSIC

M3GM.1: Singing, alone and with others, a varied repertoire of music

a. Sing melodies in the range of an octave using appropriate head voice accompanied and unaccompanied

M3GM.5: Composing and arranging music within specified guidelines

a. create rhythmic motives to enhance literature.

M3GM.3: Reading and notating music

a. Read rhythmic patterns including quarter note, quarter rest, paired eighth notes, half notes, and whole notes using traditional symbols in 2/4 and 4/4 meter.

b. Notate rhythmic patterns including the use of quarter notes, quarter rest, paired eighth notes, half notes, and whole notes in response to teacher performance.

M3GM.6 – Listening to, analyzing, and describing music

M3GM.7 – Evaluating music and music performances

a. Evaluate musical performances of themselves and others.

National Standards

MATH

NM-PROB.PK-12.1: Build new mathematical knowledge through problem solving

NM-PROB.PK-12.3: Apply and adapt a variety of appropriate strategies to solve problems

MUSIC

1. Singing, alone, and with others, a varied repertoire of music.

3. Improvising melodies, variations, and accompaniments.

4. Composing and arranging music within specified guidelines.

5. Reading and notating music.

6. Listening to, analyzing, and describing music.

7. Evaluating music and musical performances.

8. Understanding relationships between music, the other arts, and disciplines outside of the arts.