

## Objective

By the end of this lesson, the student will understand the relationship between music composition and math through rhythmic patterns and note values. The student will create their own simple musical piece using mathematical concepts.

## Materials and Prep

- Paper
- Pencil
- Metronome (or a simple timer)
- Optional: A musical instrument (like a keyboard or xylophone) if available

Before the lesson, review basic note values (whole, half, quarter notes) and simple addition and subtraction, as these will be used throughout the activities.

## Activities

### • Rhythm Patterns:

Start by clapping different rhythmic patterns. The student will create a rhythm using whole, half, and quarter notes. They will then write it down on paper and clap it back to you.

### • Math and Music Connection:

Introduce simple equations that correspond to note values. For example, explain that two quarter notes equal one half note. The student will create their own equations using note values and draw them on paper.

### • Compose a Mini Song:

Using the rhythms and equations they created, the student will compose a short 4-bar song. They can use their voice or any available instrument to play it out loud.

### • Performance Time:

Have a mini performance where the student presents their composition. Encourage them to explain the math behind their song, such as how they used note values to create rhythms.

## Talking Points

- "Did you know that music is just like math? Both have patterns, and we can use numbers to create rhythms!"
- "When we clap a rhythm, we are using fractions of time. A whole note is like holding your breath for a long time, while a quarter note is like a quick breath!"
- "Let's see how we can add these note values together. If I have one half note and two quarter notes, how many beats do I have in total?"
- "When you compose your song, think of it as telling a story. Each note and rhythm is a part of that story!"
- "Music can help us understand math better, and math can help us create more interesting music! Isn't that cool?"